Actiontec™

Dual-Mode

Wireless–Ready Cable DSL Router

User Manual

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Introduction

1

Thank you for purchasing the *Action*tec Dual-Mode Wireless-Ready Cable/DSL Router. This Router is the simplest way to connect a small number of computers to a single high-speed broadband modem. This easy-to-use product is perfect for the home office or small business. If you want to take your computing to the next level, the *Action*tec Wireless-Ready Cable/DSL Router is one of the keys to your success.

Package Contents

- *Action*tec Wireless-Ready Cable/DSL Router
- Power cord
- Yellow cable (Ethernet)
- Purple cable (USB)
- Installation CD (Disk 1 [includes user manual])
- Orange bag (contains Disk #2 and Orange Quick Start Guide)
- Clear bag (contains AOL Broadband CD and Quick Start Guide)
- START HERE Guide

Minimum System Requirements

- Computer(s) with the following:
    - a 10 Mbps or 10/100 Mbps Ethernet connection, or USB connection
    - Microsoft Windows 98, 98 Second Edition (SE), Millennium Edition (Me), 2000, XP, or Apple Macintosh operating system

☞ ***Note***: Connecting the Router via USB is not supported when using Macinstosh operating systems.

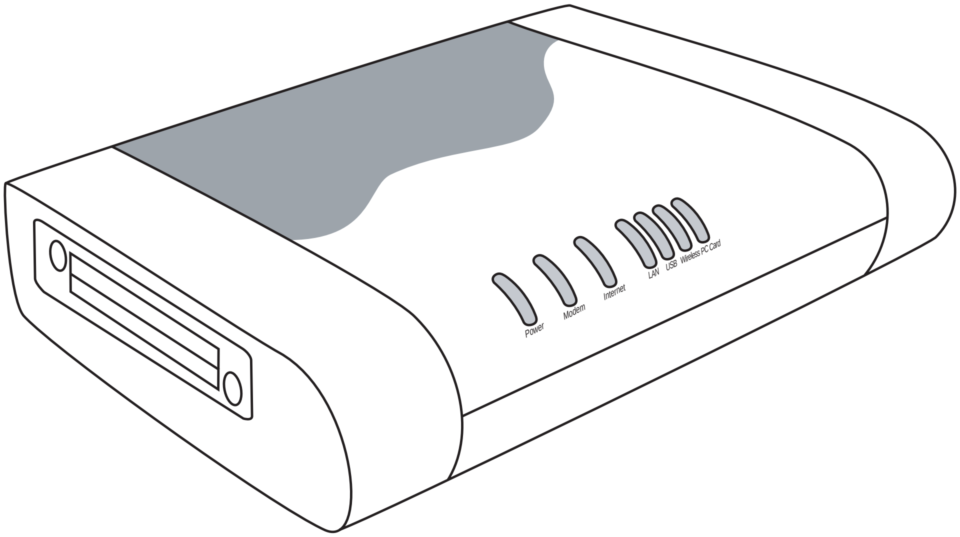
    - Internet Explorer 4.0 or higher (5.x recommended) or Netscape Navigator 4.0 or higher (4.7 recommended)
- TCP/IP network protocol installed

Router Features

The Router has a series of LEDs (lights), as well as two PC Card slots and a variety of ports. It is recommended that the user become familiar with these features before installing or setting up the Router.

Front Panel

There are seven LEDs (light emitting diodes, or lights) on the front panel of the Router, as shown in the figure, below.



Power LED

The Power LED glows green when power is supplied to the Router. When it flashes, the Router is going through its initialization process.

Modem LED

The Modem LED glows green when a broadband device (cable/DSL modem, for example) is connected to the Router, and flashes when the Router is going through its initialization process.

Internet LED

The Internet LED flickers green when the Router connects to the Internet through a cable/DSL modem.

LAN LED

The LAN LED glows green when the Router is successfully connected to a computer with the yellow (Ethernet) cable.

USB LED

The USB LED glows green when the Router is successfully connected to a computer with the purple (USB) cable.

Wireless LED

The Wireless LED glows green when the Router (with an optional *Action*tec 11 Mbps Wireless PC Card installed in the PC Card slot) has successfully connected to a wireless network.

PC Card LED

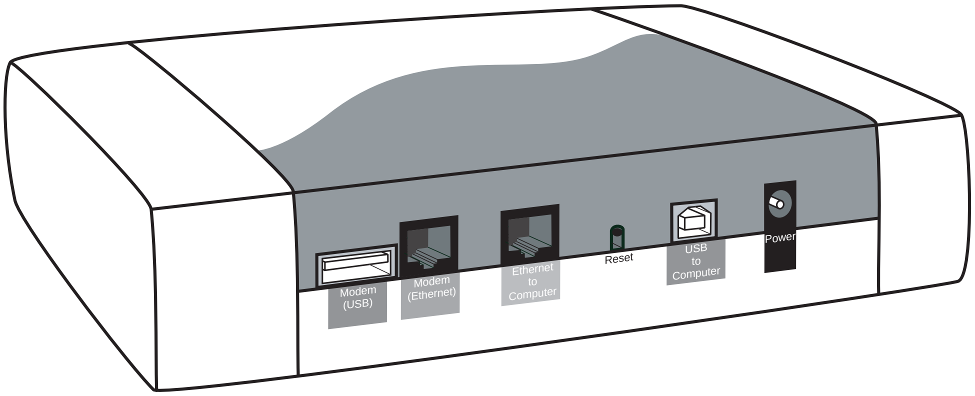
The PC Card LED glows green when an *Action*tec 11Mbps Wireless PC Card is installed in the Router's PC Card slot.

PC Card Slots

The Router has two PC Card slots, located on the left side of the Router, as shown in the figure on the preceding page. These slots can be used with an *Action*tec 11 Mbps Wireless PC Card to allow wireless networking, or for possible future *Action*tec products and/or applications.

Rear Panel

The Router has five ports and a Reset button on its rear panel.



Blue Port (Modem [USB])

The Blue port is used to connect the Router to the *Action*tec USB Home DSL Modem with a USB cable.

Red Port (Modem [Ethernet])

The Red port is used to connect the Router to any Ethernet cable or DSL modem.

Yellow Port (Ethernet to Computer)

The Yellow port is used to connect the Router to a computer on the home network with the Yellow (Ethernet) cable.

Purple Port (USB to Computer)

The Purple port is used to connect the Router to a computer on the home network with the Purple (USB) cable.

Black Port (Power)

The Black port is used to connect the Router's Power cord.

Reset Button

The Reset button is used to reset the Router. Holding the button down for less than 10 seconds causes the Router to restart, with all settings remaining intact. If the Reset button is held for more than 10 seconds, the default settings will be reloaded onto the Router, and any changes made to the settings must be reinstalled on the Router.

Technical Support

*Action*tec Electronics, Inc., prides itself on making durable, high-quality, high-performance products. If you need assistance, the *Action*tec Technical Support Department is always available, 24 hours a day, seven days a week, to provide professional support.

Actiontec™

Actiontec Electronics, Inc.

760 N. Mary Avenue
Sunnyvale, CA 94085

Technical Support
Phone: 1.888.436.0657
Email: techsupp@actiontec.com
Internet: www.actiontec.com/support

Setting Up the Router

2

The instructions that follow parallel the steps contained in the Intstallation Buddy, which provides a visual guide to setting up the Router. It is recommended that the user run the Installation Buddy first, before attempting any other procedures.

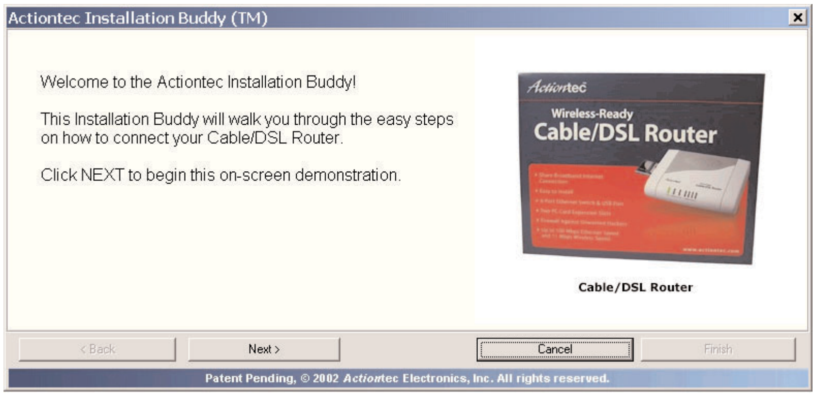
To set up the Router, the user must connect it to both a cable or DSL modem and a computer. After connecting this first computer, other computers can be added to the network via USB, Ethernet, or wirelessly (see "Connecting Additional Computers on page 21).

Connecting a Computer to the Router

Connecting a computer to the Router for setup involves three basic steps: initial setup and plugging in the Router's Power Cord, connecting the Router to the cable/DSL modem, and connecting the Router to the computer.

Initial Set Up and Plugging in the Power Cord

1. Insert **Disk 1** (Installation Buddy CD) in the CD-ROM drive of the computer. The Installaton Buddy will start automatically. Wait until the following screen appears, read the onscreen instructions, then click **Next**.



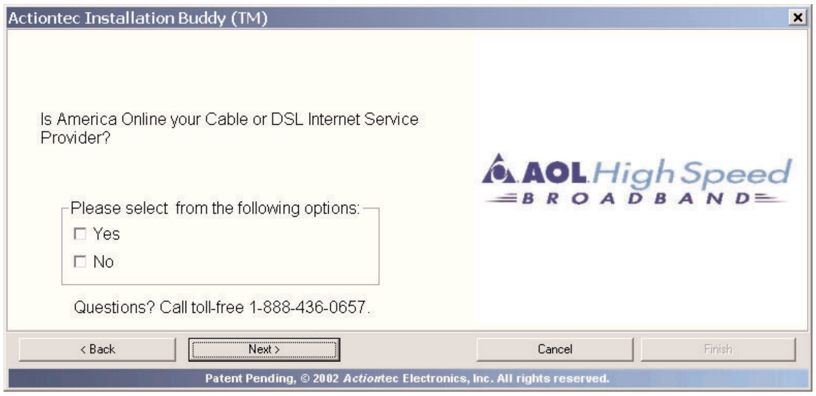
Welcome to the Actiontec Installation Buddy!

This Installation Buddy will walk you through the easy steps on how to connect your Cable/DSL Router.

Click NEXT to begin this on-screen demonstration.

Patent Pending, © 2002 Actiontec Electronics, Inc. All rights reserved.

2. The next window appears. Answer the onscreen question (**Yes** if AOL provides Broadband Internet access, **No** if another company provides the access), then click **Next**.



Actiontec Installation Buddy (TM)
AOL High Speed
BROADBAND
< Back
Next >
Cancel
Finish

Is America Online your Cable or DSL Internet Service Provider?

Please select from the following options:
☐ Yes
☐ No

Questions? Call toll-free 1-888-436-0657.

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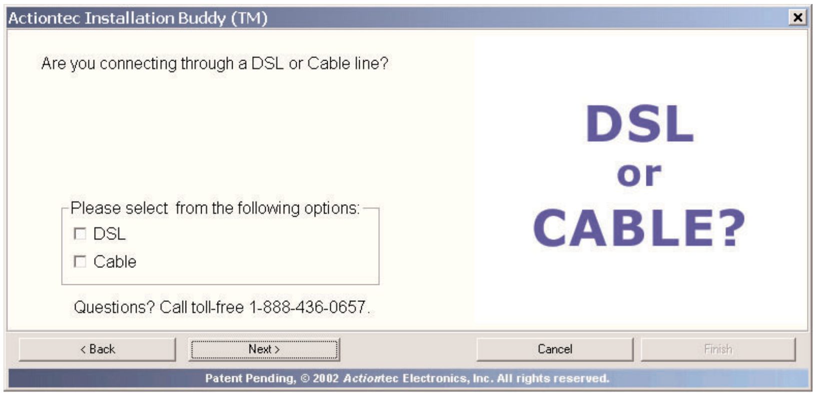
3. In the next window, select the type of Internet access provided (**Cable** or **DSL**), then click **Next**.



Actiontec Installation Buddy (TM)
DSL
or
CABLE?
< Back
Next >
Cancel
Finish

Are you connecting through a DSL or Cable line?

Please select from the following options:
☐ DSL
☐ Cable

Questions? Call toll-free 1-888-436-0657.

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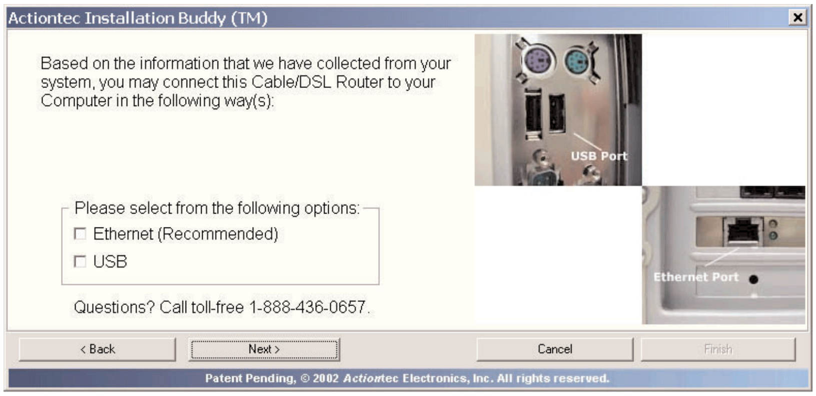
☞ ***Note***: To determine what kind of Internet access is provided, check the modem to see whether it is identified as either cable or DSL. If no identification exists, check the type of cable that connects to the modem. If the cable is a phone cord, it is a DSL modem; if the cable is a coaxial cable, it is a cable modem.

4. When the next window appears, select the type of connection to be used between the modem and computer (**Ethernet** or **USB**). If only one selection appears, select it, then click **Next**.



Actiontec Installation Buddy (TM)

Based on the information that we have collected from your system, you may connect this Cable/DSL Router to your Computer in the following way(s):

Please select from the following options:

☐ Ethernet (Recommended)

☐ USB

Questions? Call toll-free 1-888-436-0657.

USB Port
Ethernet Port
< Back
Next >
Cancel
Finish
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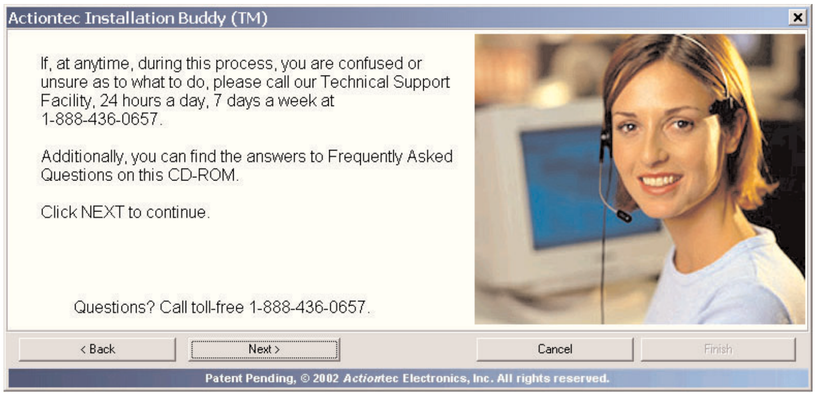
5. The next window appears, with information regarding *Action*tec's 24-hour, 7-day-a-week Technical Support. If you have any problems, call **1.888.436.0657**. Click **Next**.



Actiontec Installation Buddy (TM)

If, at anytime, during this process, you are confused or unsure as to what to do, please call our Technical Support Facility, 24 hours a day, 7 days a week at 1-888-436-0657.

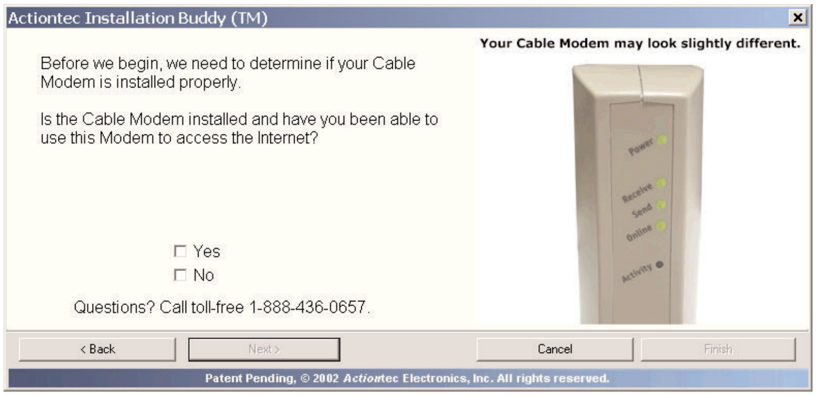
Additionally, you can find the answers to Frequently Asked Questions on this CD-ROM.

Click NEXT to continue.

Questions? Call toll-free 1-888-436-0657.

< Back
Next >
Cancel
Finish
Patent Pending, © 2002 Actiontec Electronics, Inc. All rights reserved.

6. The next window appears, asking whether the cable or DSL modem has been connected properly. Read the instructions, answer the question (**Yes** or **No**), then click **Next**.


Actiontec Installation Buddy (TM)
Power
Receive
Send
Online
Activity
< Back
Next >
Cancel
Finish
Patent Pending, © 2002 *Action*tec Electronics, Inc. All rights reserved.

Your Cable Modem may look slightly different.

Before we begin, we need to determine if your Cable Modem is installed properly.

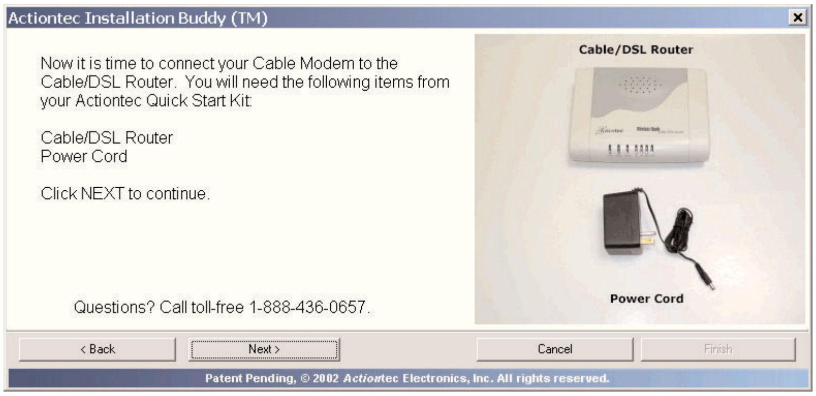
Is the Cable Modem installed and have you been able to use this Modem to access the Internet?

☐ Yes
☐ No

Questions? Call toll-free 1-888-436-0657.

☞ ***Note***: Depending on the configuruation, the window shown in the figure above may vary.

7. When the next window appears, check the *Action*tec Quick Start Kit to ensure the items onscreen are present, then click **Next**.


Actiontec Installation Buddy (TM)
Cable/DSL Router
Power Cord
< Back
Next >
Cancel
Finish
Patent Pending, © 2002 *Action*tec Electronics, Inc. All rights reserved.

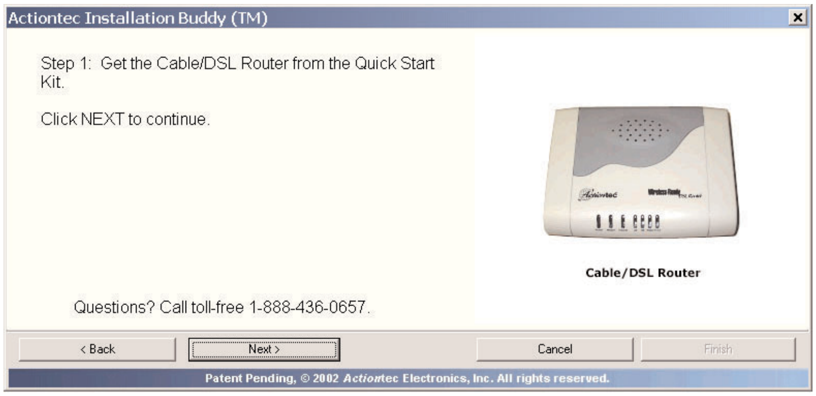
Now it is time to connect your Cable Modem to the Cable/DSL Router. You will need the following items from your Actiontec Quick Start Kit:

Cable/DSL Router
Power Cord

Click NEXT to continue.

Questions? Call toll-free 1-888-436-0657.

8. In the next window, read the instructions regarding taking the Router out of its protective plastic bag and placing it a desired location, then click **Next**.

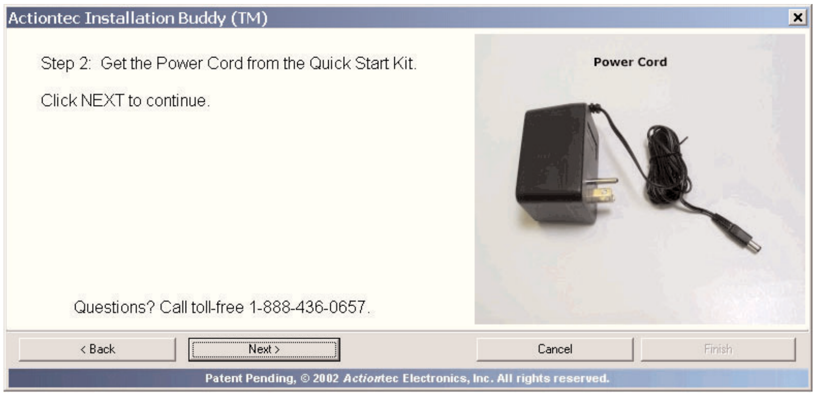

Actiontec Installation Buddy (TM)
Cable/DSL Router
< Back
Next >
Cancel
Finish
Patent Pending, © 2002 *Action*tec Electronics, Inc. All rights reserved.

Step 1: Get the Cable/DSL Router from the Quick Start Kit.

Click NEXT to continue.

Questions? Call toll-free 1-888-436-0657.

9. In the next window, read the instructions regarding getting the power cord, then click **Next**.



Actiontec Installation Buddy (TM)
Power Cord
< Back
Next >
Cancel
Finish

Step 2: Get the Power Cord from the Quick Start Kit.

Click NEXT to continue.

Questions? Call toll-free 1-888-436-0657.

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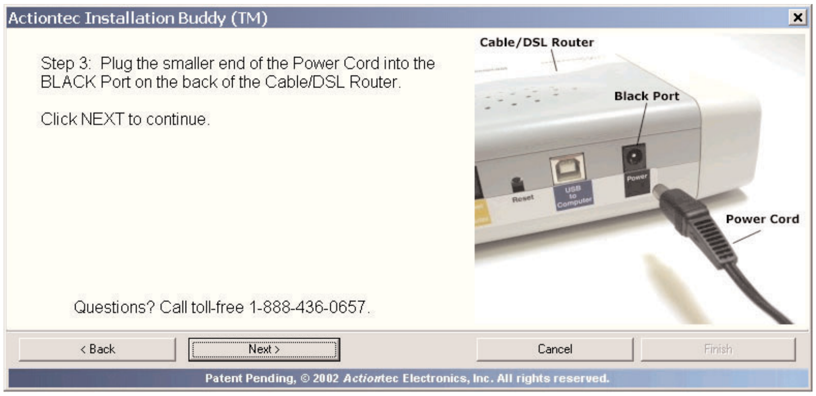
☞ ***Note***: Depending on the country, the picture in the figure above may or may not reflect the type of power cord supplied.

10. The next window appears. Plug the smaller end of the power cord into the BLACK port on the back of the Router, then click **Next**.



Actiontec Installation Buddy (TM)
Cable/DSL Router
Black Port
Reset
USB to Computer
Power
Power Cord
< Back
Next >
Cancel
Finish

Step 3: Plug the smaller end of the Power Cord into the BLACK Port on the back of the Cable/DSL Router.

Click NEXT to continue.

Questions? Call toll-free 1-888-436-0657.

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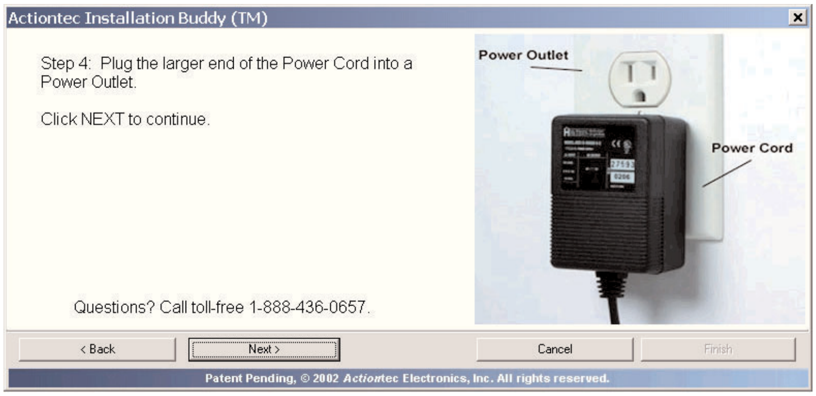
11. When the next window appears, plug the larger end of the power cord into a power outlet, then click **Next**.



Actiontec Installation Buddy (TM)

Step 4: Plug the larger end of the Power Cord into a Power Outlet.

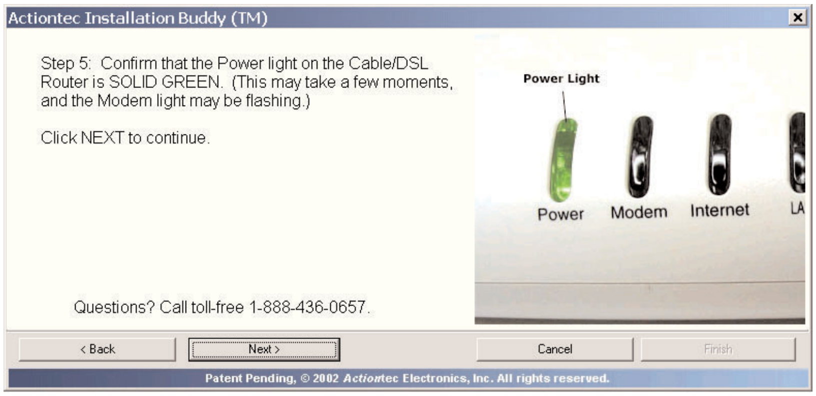
Click NEXT to continue.

Questions? Call toll-free 1-888-436-0657.

Power Outlet
Power Cord
< Back
Next >
Cancel
Finish
Patent Pending, © 2002 Actiontec Electronics, Inc. All rights reserved.

☞ *Note*: Depending on the country, the picture in the figure above may or may not reflect the type of power cord and power outlet being used.

12. The Router powers up. When the next window appears, confirm that the Power light on the Router glows steadily green (it may take a few moments for this to occur as the Router goes through its initialization process and the Power light flickers), then click **Next**.



Actiontec Installation Buddy (TM)

Step 5: Confirm that the Power light on the Cable/DSL Router is SOLID GREEN. (This may take a few moments, and the Modem light may be flashing.)

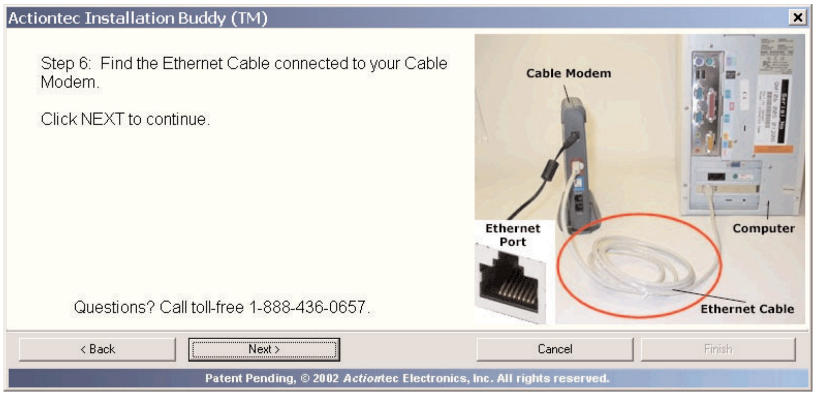
Click NEXT to continue.

Questions? Call toll-free 1-888-436-0657.

Power Light
Power
Modem
Internet
LA
< Back
Next >
Cancel
Finish
Patent Pending, © 2002 Actiontec Electronics, Inc. All rights reserved.

Connecting to the Modem

1. The following window appears, find the Ethernet cable connecting the computer to your modem, then click **Next**.


Actiontec Installation Buddy (TM)
Cable Modem
Computer
Ethernet Port
Ethernet Cable
< Back
Next >
Cancel
Finish

Step 6: Find the Ethernet Cable connected to your Cable Modem.

Click NEXT to continue.

Questions? Call toll-free 1-888-436-0657.

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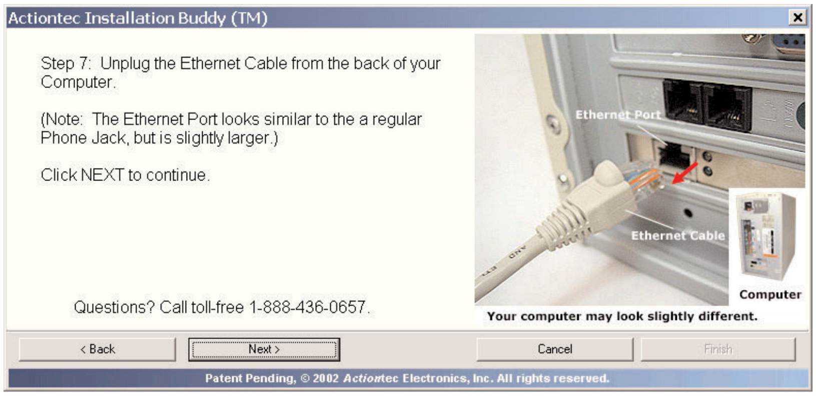
☞ ***Note***: Depending on the type of modem, the picture in the figure above may or may not reflect the configuration used.

2. When the next window appears, unplug the Ethernet cable from the back of the computer, then click **Next**.


Actiontec Installation Buddy (TM)
Ethernet Port
Ethernet Cable
Computer
< Back
Next >
Cancel
Finish

Step 7: Unplug the Ethernet Cable from the back of your Computer.

(Note: The Ethernet Port looks similar to the a regular Phone Jack, but is slightly larger.)

Click NEXT to continue.

Questions? Call toll-free 1-888-436-0657.

Your computer may look slightly different.

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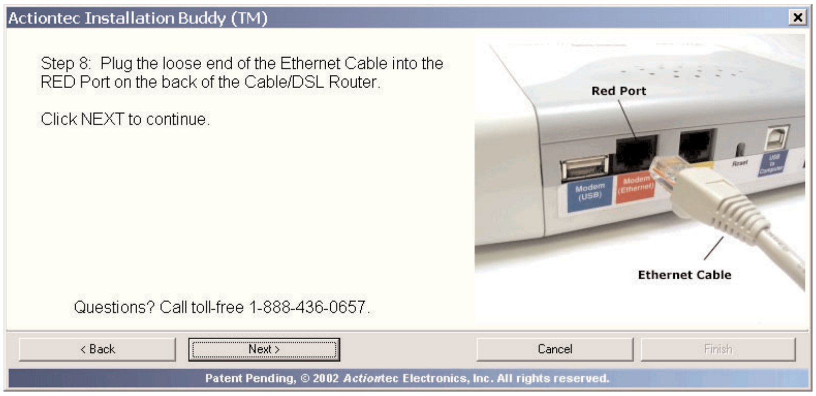
☞ ***Note***: An Ethernet port looks similar to a phone jack, but is slightly larger.

3. Another window appears. Plug the loose end of the Ethernet cable into the RED port on the back of the Router, then click **Next**.



Actiontec Installation Buddy (TM)

Step 8: Plug the loose end of the Ethernet Cable into the RED Port on the back of the Cable/DSL Router.

Click NEXT to continue.

Questions? Call toll-free 1-888-436-0657.

Red Port
Modem (USB)
Modem (Ethernet)
Reset
USB to Computer
Ethernet Cable
< Back
Next >
Cancel
Finish
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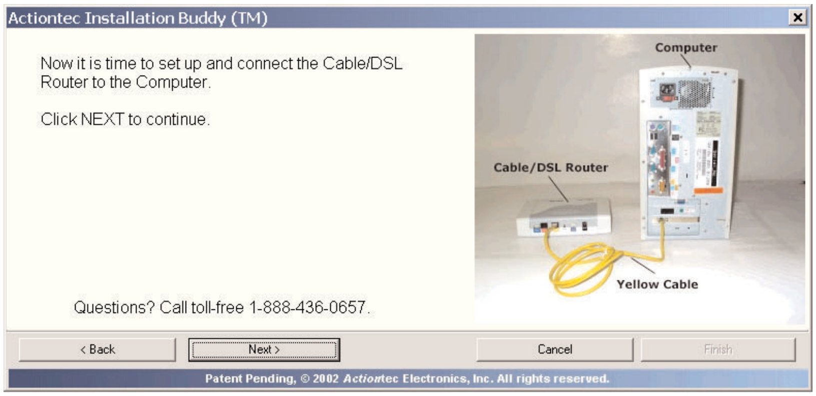
4. Ensure the other end of the Ethernet cable is still plugged into the modem. The Ethernet cable should now be connecting the modem to the Router.

Connecting to a Computer

Connecting via Ethernet (Recommended)

1. If Ethernet was selected previously (see step 4 in “Initial Setup…”), the following window will appear. Click **Next** to continue.



Actiontec Installation Buddy (TM)

Now it is time to set up and connect the Cable/DSL Router to the Computer.

Click NEXT to continue.

Questions? Call toll-free 1-888-436-0657.

Computer
Cable/DSL Router
Yellow Cable
< Back
Next >
Cancel
Finish
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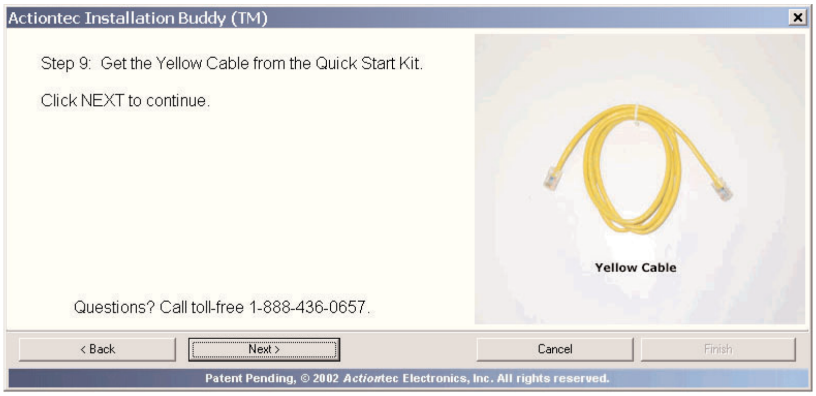
2. When the next window appears, get the **Yellow Cable** (Ethernet) from the *Action*tec Quick Start Kit, then click **Next**.



Actiontec Installation Buddy (TM)

Step 9: Get the Yellow Cable from the Quick Start Kit.

Click NEXT to continue.

Questions? Call toll-free 1-888-436-0657.

Yellow Cable
< Back
Next >
Cancel
Finish
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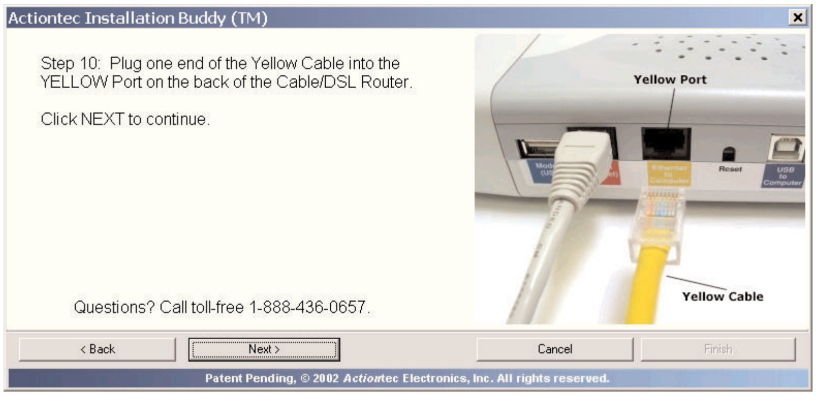
3. Another window appears. Plug one end of the **Yellow Cable** (Ethernet) into the **Yellow Port** (Ethernet to Computer) on the back of the Router, then click **Next**.



Actiontec Installation Buddy (TM)

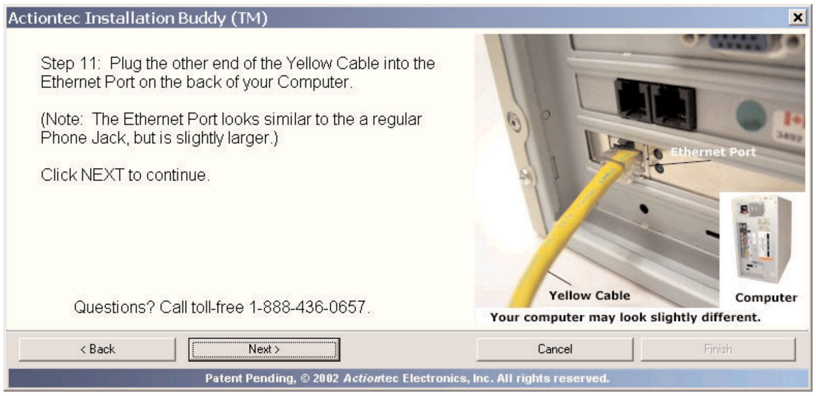
Step 10: Plug one end of the Yellow Cable into the YELLOW Port on the back of the Cable/DSL Router.

Click NEXT to continue.

Questions? Call toll-free 1-888-436-0657.

Yellow Port
Reset
USB to Computer
Yellow Cable
< Back
Next >
Cancel
Finish
Patent Pending, © 2002 Actiontec Electronics, Inc. All rights reserved.

4. In the next window, read the instructions. Plug the other end of the yellow (Ethernet) cable into an Ethernet port on the back of the computer, then click **Next**.


Actiontec Installation Buddy (TM)
Ethernet Port
Yellow Cable
Computer
< Back
Next >
Cancel
Finish

Step 11: Plug the other end of the Yellow Cable into the Ethernet Port on the back of your Computer.

(Note: The Ethernet Port looks similar to the a regular Phone Jack, but is slightly larger.)

Click NEXT to continue.

Questions? Call toll-free 1-888-436-0657.

Your computer may look slightly different.

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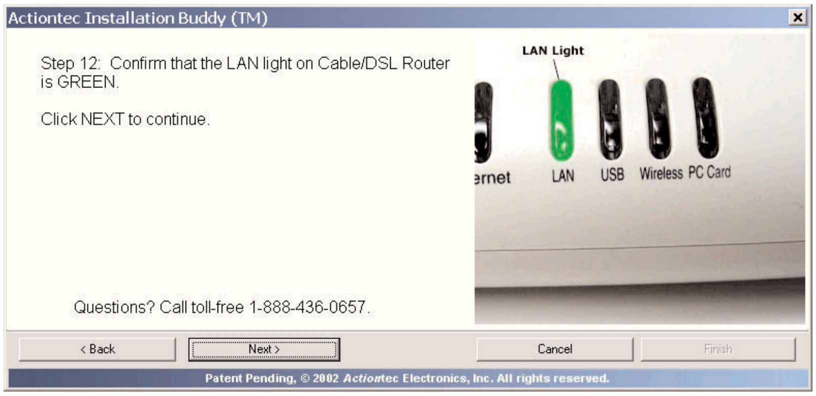
☞ ***Note***: An Ethernet port looks similar to a phone jack, but is slightly larger.

5. Ensure that the **LAN light** on the Router glows steadily green, as shown in the following window, then click **Next**.


Actiontec Installation Buddy (TM)
LAN Light
ernet
LAN
USB
Wireless
PC Card
< Back
Next >
Cancel
Finish

Step 12: Confirm that the LAN light on Cable/DSL Router is GREEN.

Click NEXT to continue.

Questions? Call toll-free 1-888-436-0657.

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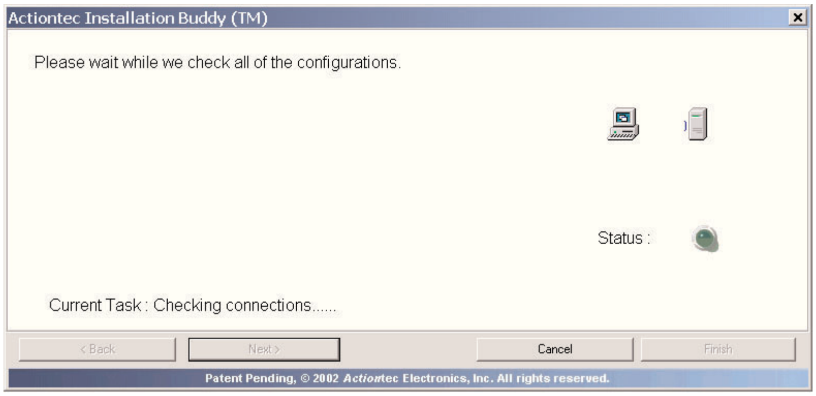
6. The following window appears while the Router is being configured. Wait until the process is completed.


Actiontec Installation Buddy (TM)
Status :
< Back
Next >
Cancel
Finish

Please wait while we check all of the configurations.

Current Task : Checking connections......

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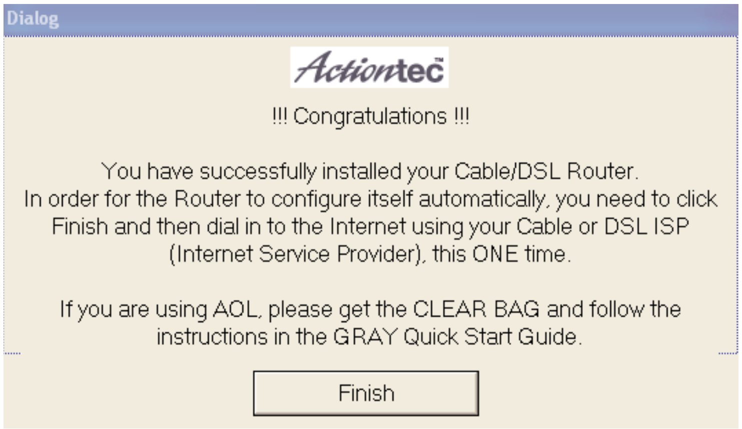
7. A Congratulations window similar to the one shown below may appear when the Router has finished its configuration process, stating that the Router has been successfully set up and is currently operating properly.


Dialog
Actiontec

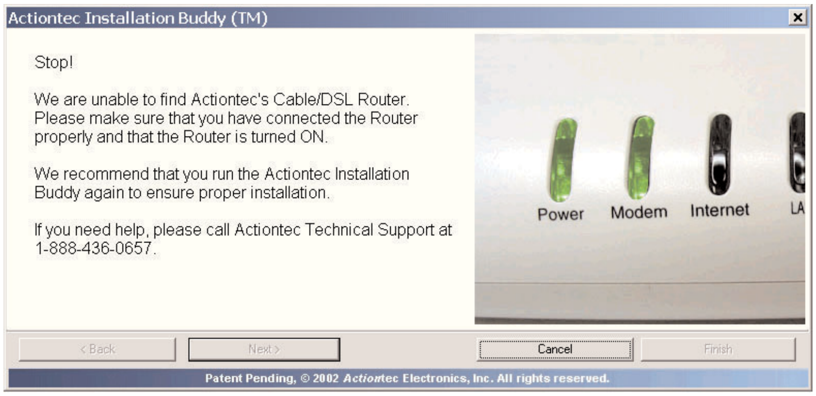
!!! Congratulations !!!

You have successfully installed your Cable/DSL Router.
In order for the Router to configure itself automatically, you need to click Finish and then dial in to the Internet using your Cable or DSL ISP (Internet Service Provider), this ONE time.

If you are using AOL, please get the CLEAR BAG and follow the instructions in the GRAY Quick Start Guide.

Finish

If the window below appears, the Router was not set up correctly. Click **Cancel** and run the Installation Buddy again. If the Router cannot be set up correctly, call *Action*tec Technical Support at **1.888.436.0657** for assistance.


Actiontec Installation Buddy (TM)

Stop!

We are unable to find Actiontec's Cable/DSL Router. Please make sure that you have connected the Router properly and that the Router is turned ON.

We recommend that you run the Actiontec Installation Buddy again to ensure proper installation.

If you need help, please call Actiontec Technical Support at 1-888-436-0657.

Power
Modem
Internet
LA
< Back
Next >
Cancel
Finish
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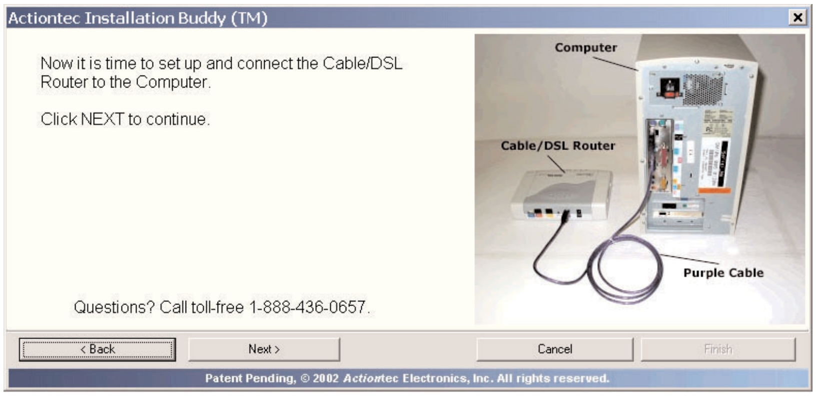
Connecting via USB

1. If USB was selected previously, (see step 4 under "Initial Setup…"), the following window will appear. Click **Next** to continue.


Actiontec Installation Buddy (TM)
Computer
Cable/DSL Router
Purple Cable
< Back
Next >
Cancel
Finish

Now it is time to set up and connect the Cable/DSL Router to the Computer.

Click NEXT to continue.

Questions? Call toll-free 1-888-436-0657.

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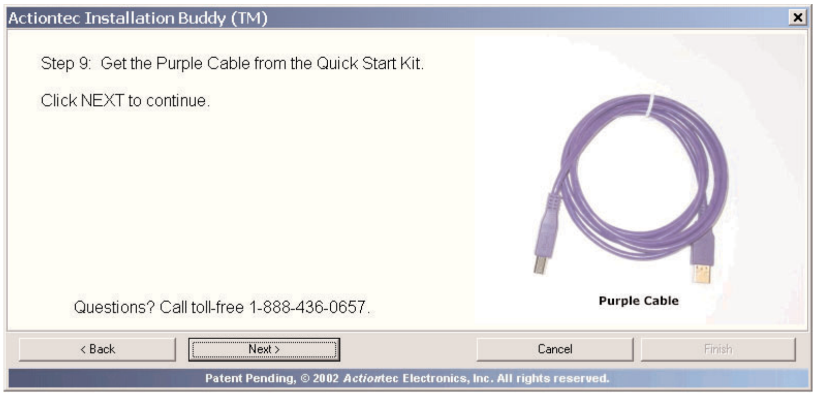
2. When the next window appears, get the **Purple Cable** (USB) from the *Action*tec Quick Start Kit, then click **Next.**


Actiontec Installation Buddy (TM)
Purple Cable
< Back
Next >
Cancel
Finish

Step 9: Get the Purple Cable from the Quick Start Kit.

Click NEXT to continue.

Questions? Call toll-free 1-888-436-0657.

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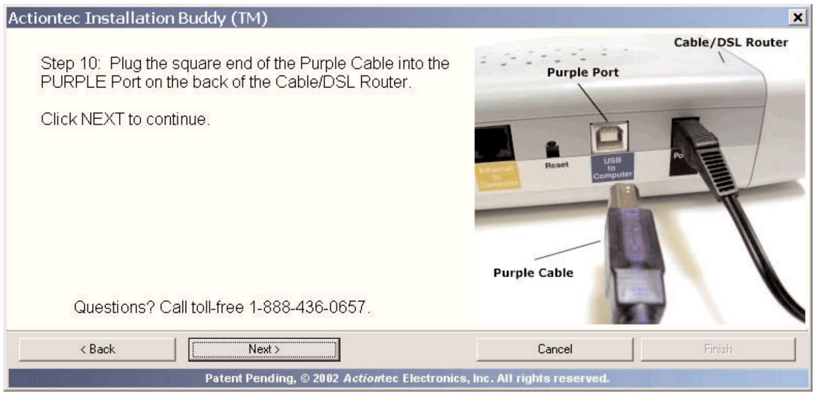
3. Another window appears. Plug the square end of the **Purple Cable** (USB) into the **Purple Port** (USB to Computer) on the back of the Router, then click **Next.**


Actiontec Installation Buddy (TM)
Cable/DSL Router
Purple Port
Reset
USB to Computer
Purple Cable
< Back
Next >
Cancel
Finish

Step 10: Plug the square end of the Purple Cable into the PURPLE Port on the back of the Cable/DSL Router.

Click NEXT to continue.

Questions? Call toll-free 1-888-436-0657.

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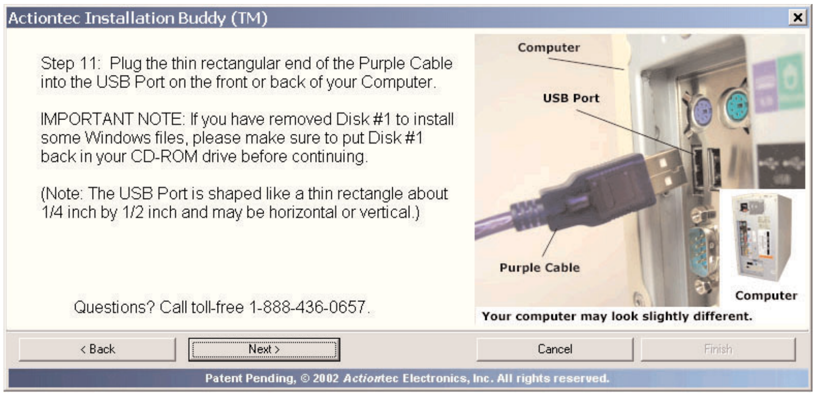
4. In the next window, read the instructions. Plug the thin, rectangular end of the **Purple Cable** (USB) into a **USB port** on the front or back of the computer, then click **Next**.


Actiontec Installation Buddy (TM)
Computer
USB Port
Purple Cable
Computer
< Back
Next >
Cancel
Finish

Step 11: Plug the thin rectangular end of the Purple Cable into the USB Port on the front or back of your Computer.

IMPORTANT NOTE: If you have removed Disk #1 to install some Windows files, please make sure to put Disk #1 back in your CD-ROM drive before continuing.

(Note: The USB Port is shaped like a thin rectangle about 1/4 inch by 1/2 inch and may be horizontal or vertical.)

Questions? Call toll-free 1-888-436-0657.

Your computer may look slightly different.

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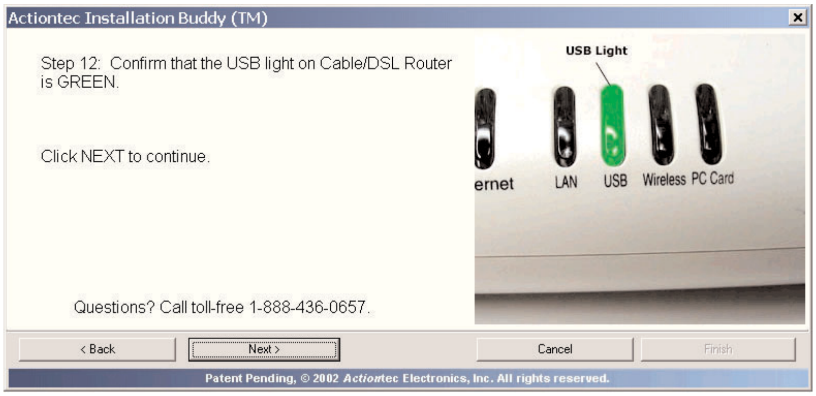
☞ ***Note***: A USB port is shaped like a thin rectangle about 1/4 inch by 1/2 inch, and may be vertically or horizontally oriented.

5. Ensure that the **USB light** on the Router glows steadily green, as shown in the following window, then click **Next**.


Actiontec Installation Buddy (TM)
USB Light
ernet
LAN
USB
Wireless
PC Card
< Back
Next >
Cancel
Finish

Step 12: Confirm that the USB light on Cable/DSL Router is GREEN.

Click NEXT to continue.

Questions? Call toll-free 1-888-436-0657.

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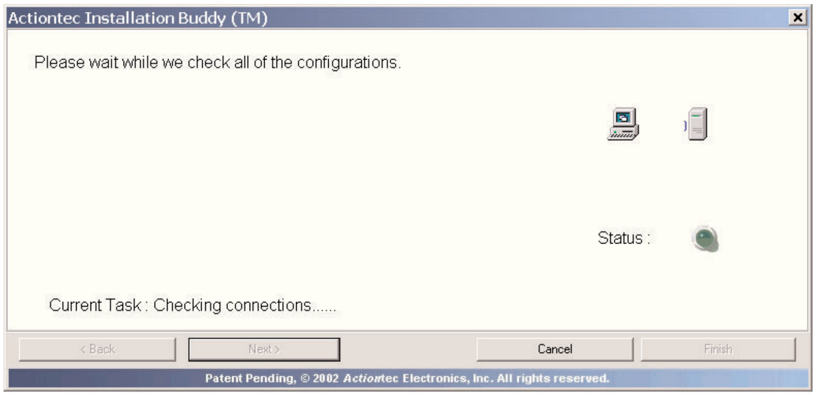
6. The following window appears while the Router is being configured. Wait until the process is completed.


Actiontec Installation Buddy (TM)
< Back
Next >
Cancel
Finish

Please wait while we check all of the configurations.

Status :

Current Task : Checking connections......

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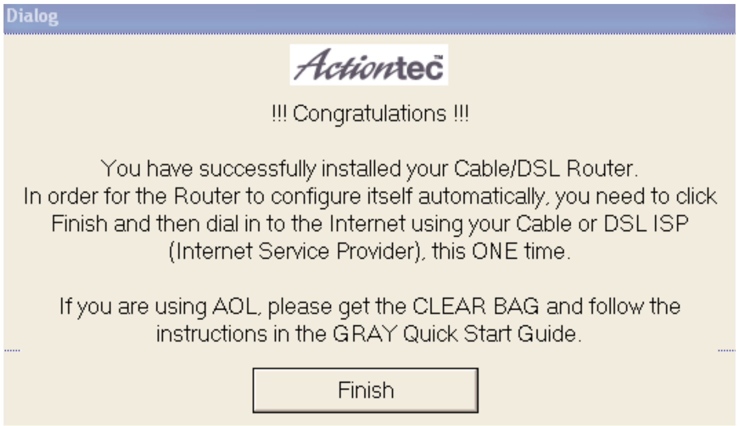
7. A Congratulations window similar to the one shown below may appear when the Router has finished its configuration process, stating that the Router has been successfully set up and is currently operating properly.

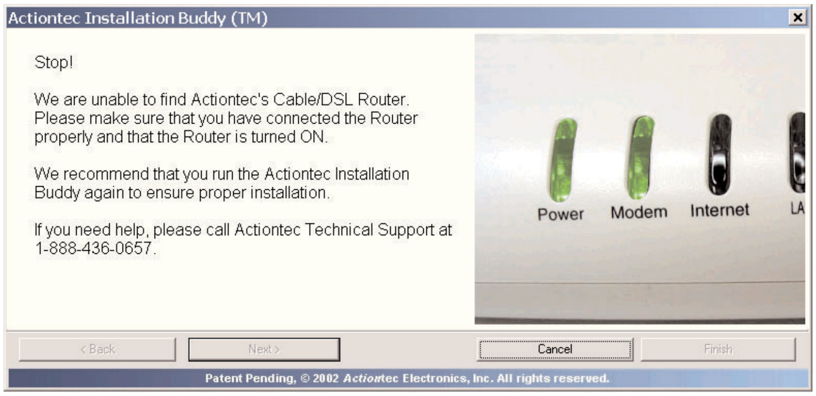


!!! Congratulations !!!

You have successfully installed your Cable/DSL Router.
In order for the Router to configure itself automatically, you need to click Finish and then dial in to the Internet using your Cable or DSL ISP (Internet Service Provider), this ONE time.

If you are using AOL, please get the CLEAR BAG and follow the instructions in the GRAY Quick Start Guide.

If the window below appears, the Router was not set up correctly. Click **Cancel** and run the Installation Buddy again. If the Router cannot be set up correctly, call *Action*tec Technical Support at **1.888.436.0657** for assistance.



Stop!

We are unable to find Actiontec's Cable/DSL Router. Please make sure that you have connected the Router properly and that the Router is turned ON.

We recommend that you run the Actiontec Installation Buddy again to ensure proper installation.

If you need help, please call Actiontec Technical Support at 1-888-436-0657.

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Connecting Additional Computers

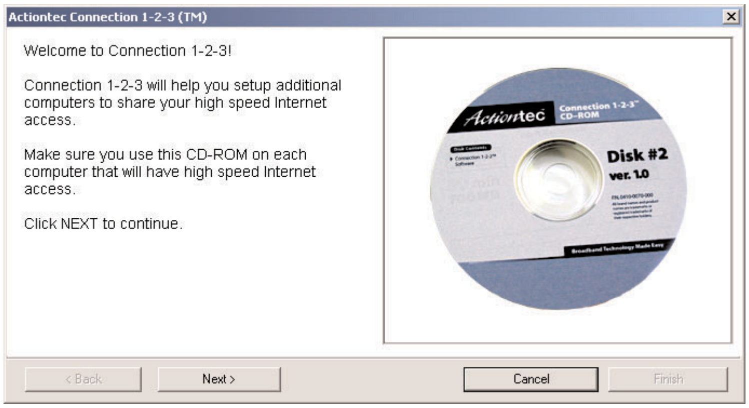
There are three ways to connect the Router to additional computers for networking: USB or Ethernet cable, or wirelessly. Select the type of connection, then follow the instructions.

Connecting via Ethernet

> ***Note***: If the first computer was connected via Ethernet, an Ethernet hub or switch must be purchased and installed to add more Ethernet-connected computers to the network. To connect more computers to the network using an Ethernet hub or switch, see the documentation that came with the hub/switch.

The following procedure assumes that a computer has not already been connected to the Router via Ethernet.

1. Insert the **Connection 1-2-3 CD** in the CD-ROM drive of the computer. When the following window appears, click **Next**.



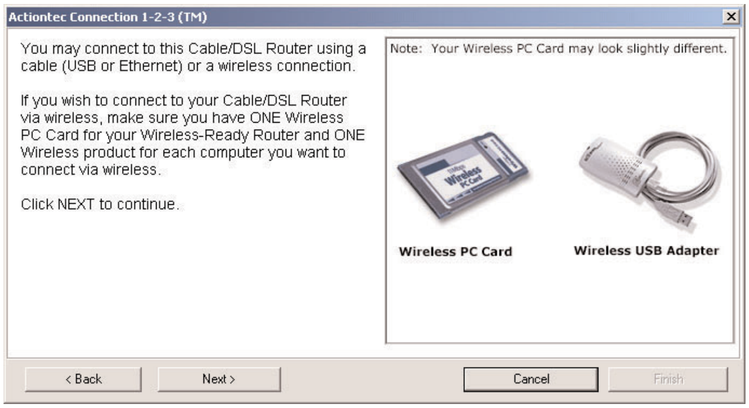
Welcome to Connection 1-2-3!

Connection 1-2-3 will help you setup additional computers to share your high speed Internet access.

Make sure you use this CD-ROM on each computer that will have high speed Internet access.

Click NEXT to continue.

2. Read the instructions in the next window, then click **Next**.


Actiontec Connection 1-2-3 (TM)
Wireless PC Card
Wireless USB Adapter
< Back
Next >
Cancel
Finish

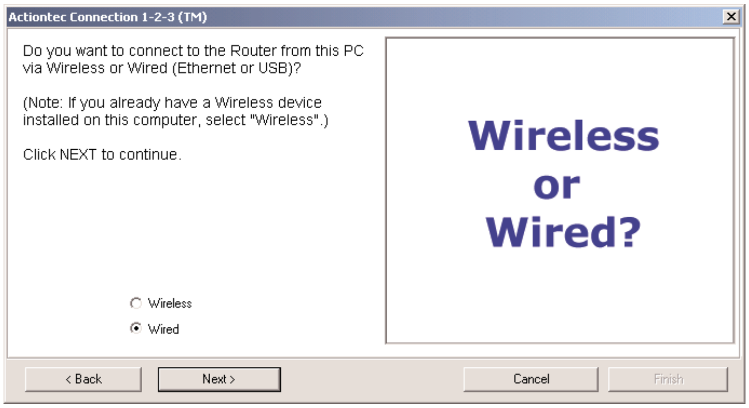
You may connect to this Cable/DSL Router using a cable (USB or Ethernet) or a wireless connection.

If you wish to connect to your Cable/DSL Router via wireless, make sure you have ONE Wireless PC Card for your Wireless-Ready Router and ONE Wireless product for each computer you want to connect via wireless.

Click NEXT to continue.

Note: Your Wireless PC Card may look slightly different.

3. Select **Wired** in the next window, then click **Next**.


Actiontec Connection 1-2-3 (TM)
Wireless
or
Wired?
< Back
Next >
Cancel
Finish

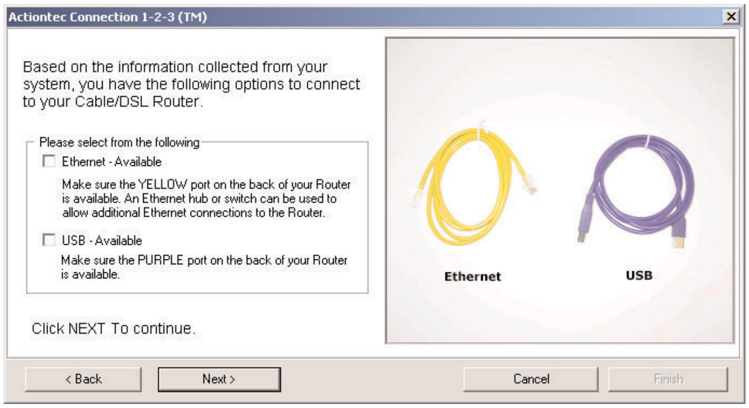
Do you want to connect to the Router from this PC via Wireless or Wired (Ethernet or USB)?

(Note: If you already have a Wireless device installed on this computer, select "Wireless".)

Click NEXT to continue.

○ Wireless
● Wired

4. When the next window appears, select **Ethernet**, then click **Next**.


Actiontec Connection 1-2-3 (TM)
Ethernet
USB
< Back
Next >
Cancel
Finish

Based on the information collected from your system, you have the following options to connect to your Cable/DSL Router.

Please select from the following

☐ Ethernet - Available

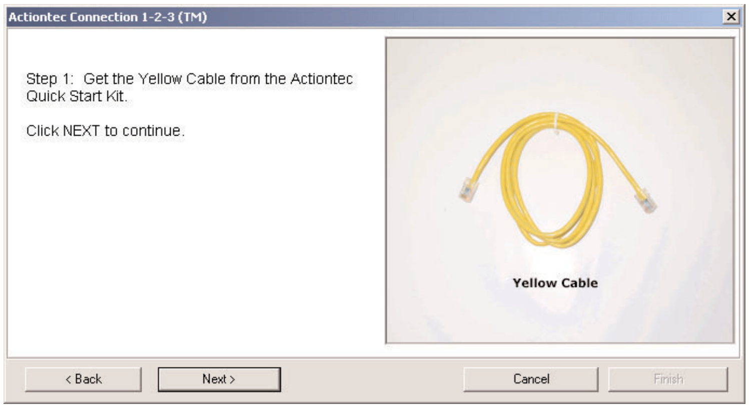
Make sure the YELLOW port on the back of your Router is available. An Ethernet hub or switch can be used to allow additional Ethernet connections to the Router.

☐ USB - Available

Make sure the PURPLE port on the back of your Router is available.

Click NEXT To continue.

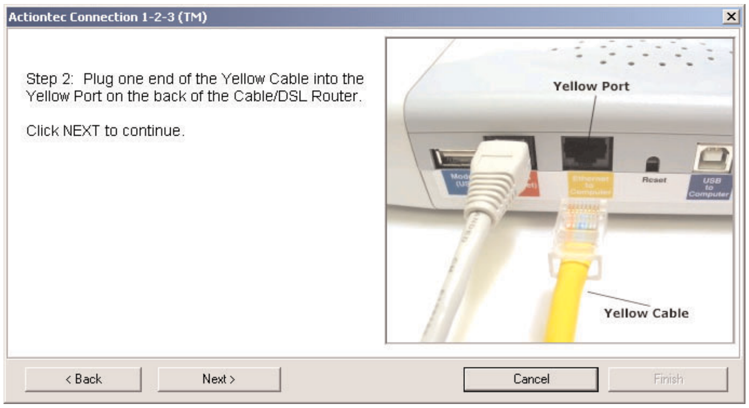
5. Get the **Yellow Cable** (**Ethernet**) from the Quick Start Kit, then click **Next**.


Actiontec Connection 1-2-3 (TM)
Yellow Cable
< Back
Next >
Cancel
Finish

Step 1: Get the Yellow Cable from the Actiontec Quick Start Kit.

Click NEXT to continue.

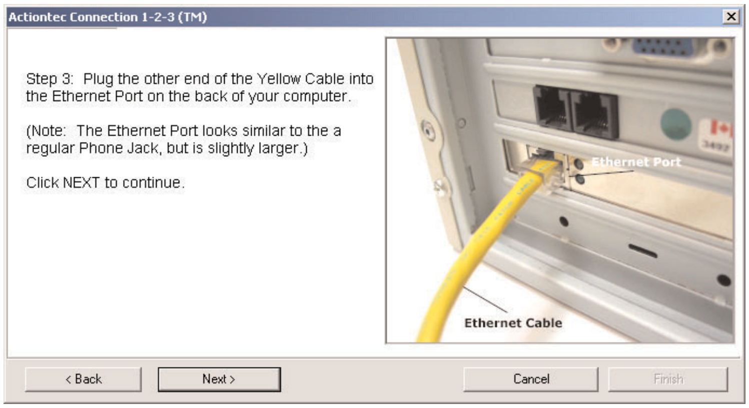
6. The next window appears. Plug one end of the **Yellow Cable** in the **Yellow Port** on the back of the Router, then click **Next**.


Actiontec Connection 1-2-3 (TM)
Yellow Port
Reset
USB to Computer
Yellow Cable
< Back
Next >
Cancel
Finish

Step 2: Plug one end of the Yellow Cable into the Yellow Port on the back of the Cable/DSL Router.

Click NEXT to continue.

7. When the next window appears, plug the other end of the **Yellow Cable** into the **Ethernet Port** on the back of the computer.


Actiontec Connection 1-2-3 (TM)
Ethernet Port
Ethernet Cable
< Back
Next >
Cancel
Finish

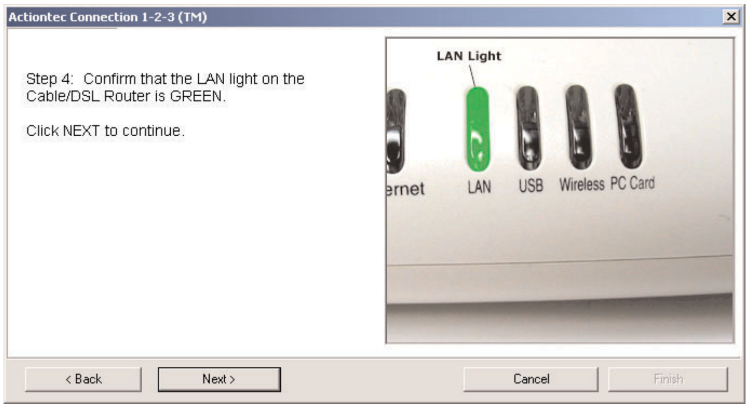
Step 3: Plug the other end of the Yellow Cable into the Ethernet Port on the back of your computer.

(Note: The Ethernet Port looks similar to the a regular Phone Jack, but is slightly larger.)

Click NEXT to continue.

☞ ***Note***: An Ethernet port looks similar to a phone jack, but is slightly larger.

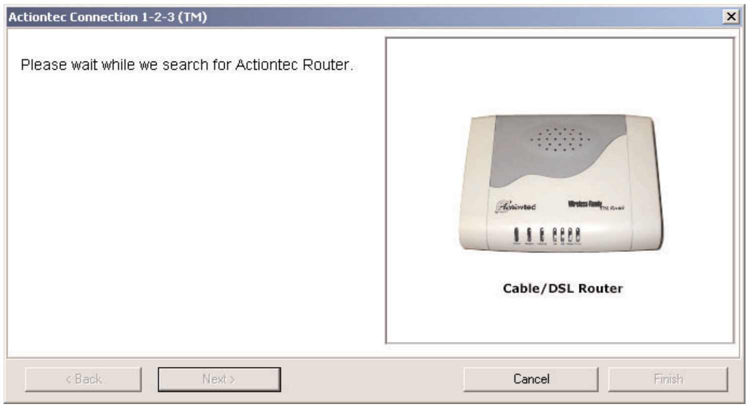
8. Ensure that the **LAN light** on the Router glows steadily green, as shown in the following window, then click **Next**.


Actiontec Connection 1-2-3 (TM)
LAN Light
ernet
LAN
USB
Wireless
PC Card
< Back
Next >
Cancel
Finish

Step 4: Confirm that the LAN light on the Cable/DSL Router is GREEN.

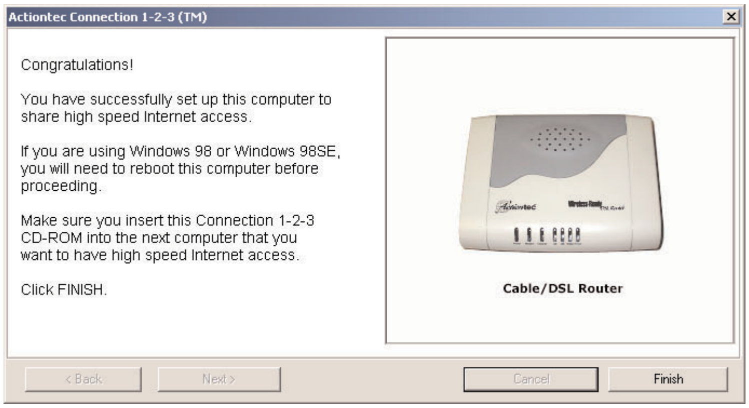
Click NEXT to continue.

9. The next window appears as the Router is being located.


Actiontec Connection 1-2-3 (TM)
Cable/DSL Router
< Back
Next >
Cancel
Finish

Please wait while we search for Actiontec Router.

10. When the Router is located, a Congratulations window similar to the one shown below appears.


Actiontec Connection 1-2-3 (TM)
Cable/DSL Router
< Back
Next >
Cancel
Finish

Congratulations!

You have successfully set up this computer to share high speed Internet access.

If you are using Windows 98 or Windows 98SE, you will need to reboot this computer before proceeding.

Make sure you insert this Connection 1-2-3 CD-ROM into the next computer that you want to have high speed Internet access.

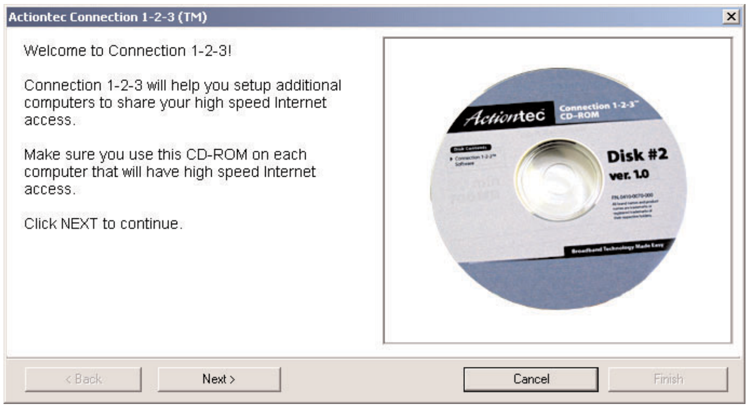
Click FINISH.

11. Click **Finish**. The computer is now connected to the Router with an Ethernet cable.

Connecting via USB

> ☞ *Note*: Only one computer can be connected to the Router via USB. If the first computer has already been connected to the Router via USB, other computers can only be connected via Ethernet cable or wirelessly.

1. Insert the **Connection 1-2-3 CD** in the CD-ROM drive of the computer. When the following window appears, click **Next**.



Actiontec Connection 1-2-3 (TM)

Welcome to Connection 1-2-3!

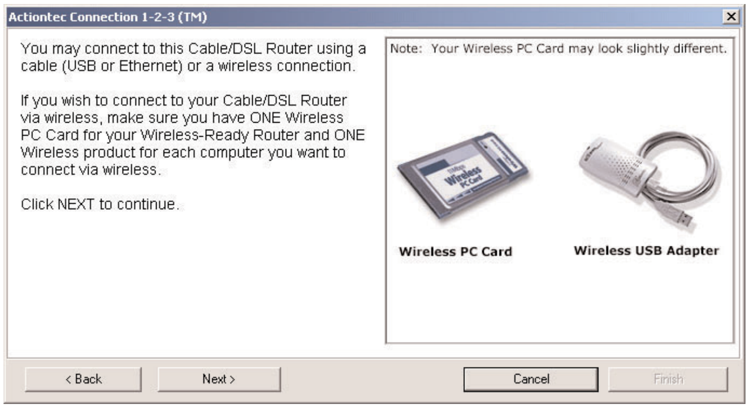
Connection 1-2-3 will help you setup additional computers to share your high speed Internet access.

Make sure you use this CD-ROM on each computer that will have high speed Internet access.

Click NEXT to continue.

Actiontec
Connection 1-2-3™ CD-ROM
Disk #2
ver. 1.0
Broadband Technology Made Easy
< Back
Next >
Cancel
Finish

2. Read the instructions in the next window, then click **Next**.



Actiontec Connection 1-2-3 (TM)

You may connect to this Cable/DSL Router using a cable (USB or Ethernet) or a wireless connection.

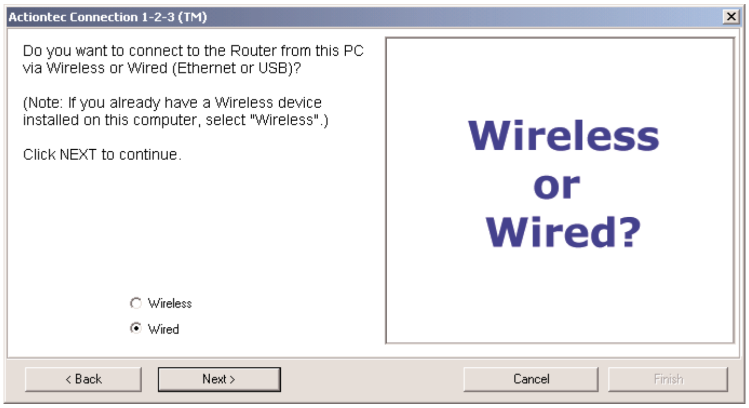
If you wish to connect to your Cable/DSL Router via wireless, make sure you have ONE Wireless PC Card for your Wireless-Ready Router and ONE Wireless product for each computer you want to connect via wireless.

Click NEXT to continue.

Note: Your Wireless PC Card may look slightly different.

Wireless PC Card
Wireless USB Adapter
< Back
Next >
Cancel
Finish

3. Select **Wired** in the next window, then click **Next**.


Actiontec Connection 1-2-3 (TM)
Wireless
or
Wired?
< Back
Next >
Cancel
Finish

Do you want to connect to the Router from this PC via Wireless or Wired (Ethernet or USB)?

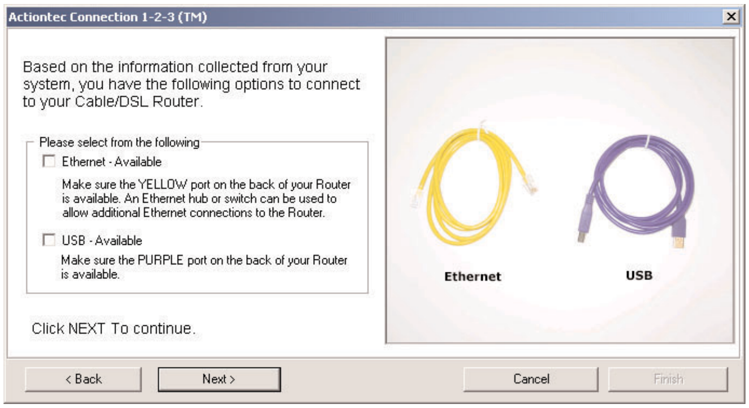
(Note: If you already have a Wireless device installed on this computer, select "Wireless".)

Click NEXT to continue.

○ Wireless

● Wired

4. When the next window appears, select **USB**, then click **Next**.


Actiontec Connection 1-2-3 (TM)
Ethernet
USB
< Back
Next >
Cancel
Finish

Based on the information collected from your system, you have the following options to connect to your Cable/DSL Router.

Please select from the following

☐ Ethernet - Available

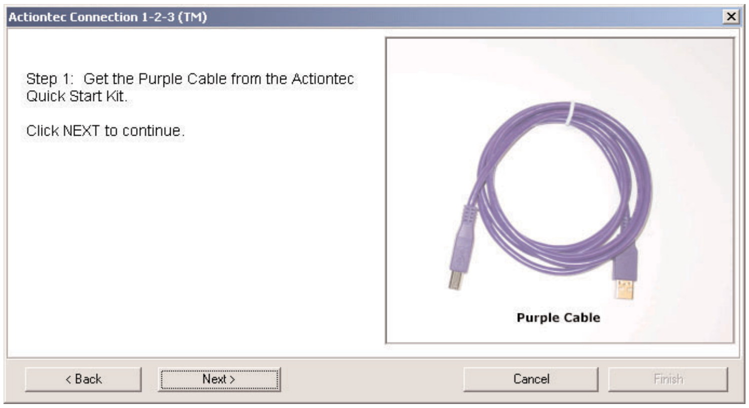
Make sure the YELLOW port on the back of your Router is available. An Ethernet hub or switch can be used to allow additional Ethernet connections to the Router.

☐ USB - Available

Make sure the PURPLE port on the back of your Router is available.

Click NEXT To continue.

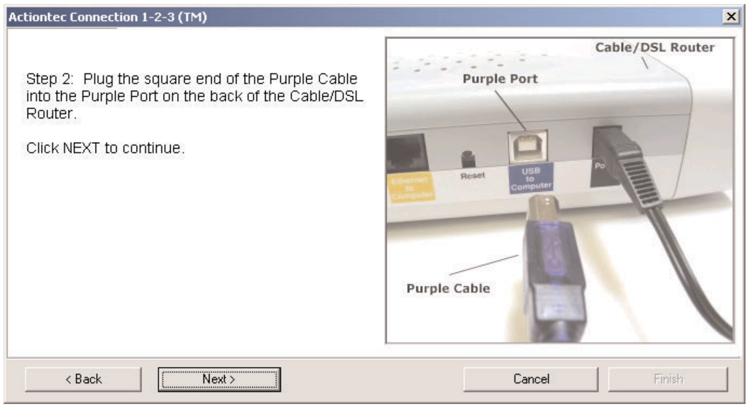
5. Get the **Purple Cable** (**USB**) from the Quick Start Kit, then click **Next**.


Actiontec Connection 1-2-3 (TM)
Purple Cable
< Back
Next >
Cancel
Finish

Step 1: Get the Purple Cable from the Actiontec Quick Start Kit.

Click NEXT to continue.

6. The next window appears. Plug square end of the **Purple Cable** in the **Puple Port** on the back of the Router, then click **Next**.



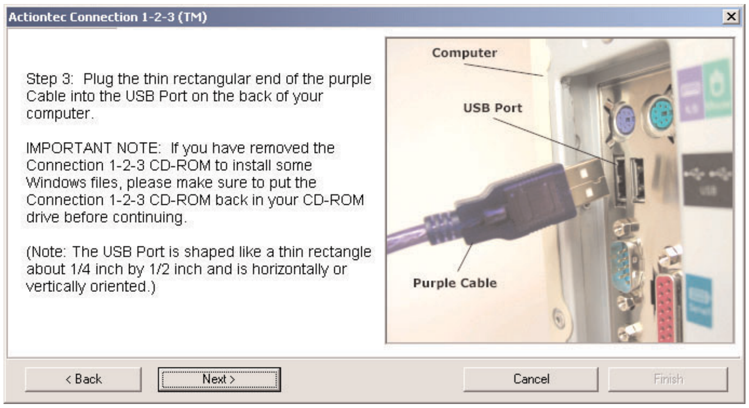
Actiontec Connection 1-2-3 (TM)

Step 2: Plug the square end of the Purple Cable into the Purple Port on the back of the Cable/DSL Router.

Click NEXT to continue.

Cable/DSL Router
Purple Port
Reset
USB to Computer
Purple Cable
< Back
Next >
Cancel
Finish

7. When the next window appears, plug the rectangular end of the **Purple Cable** into the **USB Port** on the front or back of the computer.



Actiontec Connection 1-2-3 (TM)

Step 3: Plug the thin rectangular end of the purple Cable into the USB Port on the back of your computer.

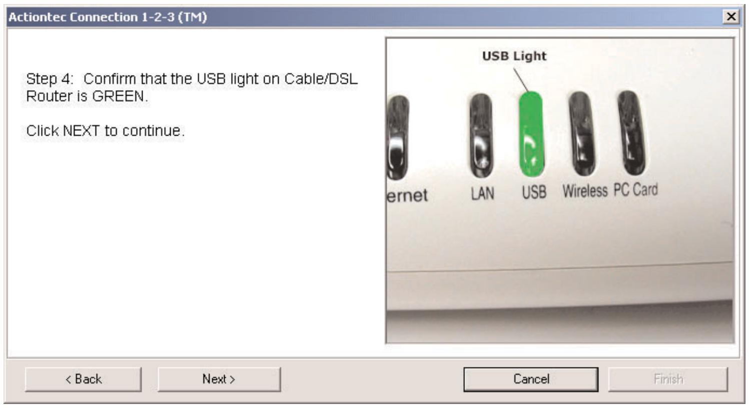
IMPORTANT NOTE: If you have removed the Connection 1-2-3 CD-ROM to install some Windows files, please make sure to put the Connection 1-2-3 CD-ROM back in your CD-ROM drive before continuing.

(Note: The USB Port is shaped like a thin rectangle about 1/4 inch by 1/2 inch and is horizontally or vertically oriented.)

Computer
USB Port
Purple Cable
< Back
Next >
Cancel
Finish

☞ ***Note***: A USB port is shaped like a thin rectangle about 1/4 inch by 1/2 inch, and may be vertically or horizontally oriented.

8. Ensure that the **USB light** on the Router glows steadily green, as shown in the following window, then click **Next**.



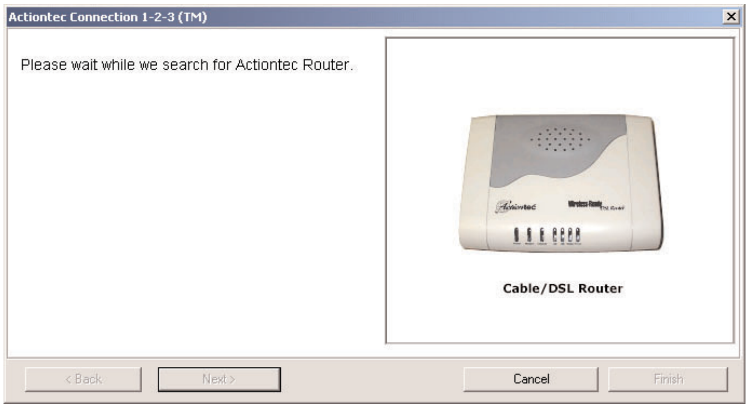
Actiontec Connection 1-2-3 (TM)

Step 4: Confirm that the USB light on Cable/DSL Router is GREEN.

Click NEXT to continue.

USB Light
ernet
LAN
USB
Wireless
PC Card
< Back
Next >
Cancel
Finish

9. The next window appears as the Router is being located.

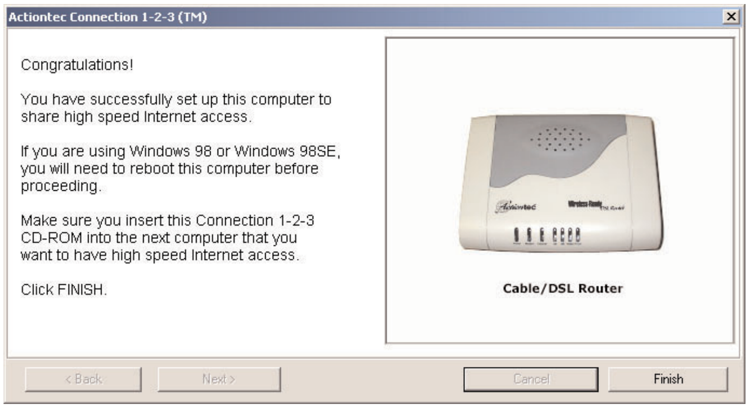


Actiontec Connection 1-2-3 (TM)

Please wait while we search for Actiontec Router.

Cable/DSL Router
< Back
Next >
Cancel
Finish

10. When the Router is located, a Congratulations window similar to the one shown below appears.



Actiontec Connection 1-2-3 (TM)

Congratulations!

You have successfully set up this computer to share high speed Internet access.

If you are using Windows 98 or Windows 98SE, you will need to reboot this computer before proceeding.

Make sure you insert this Connection 1-2-3 CD-ROM into the next computer that you want to have high speed Internet access.

Click FINISH.

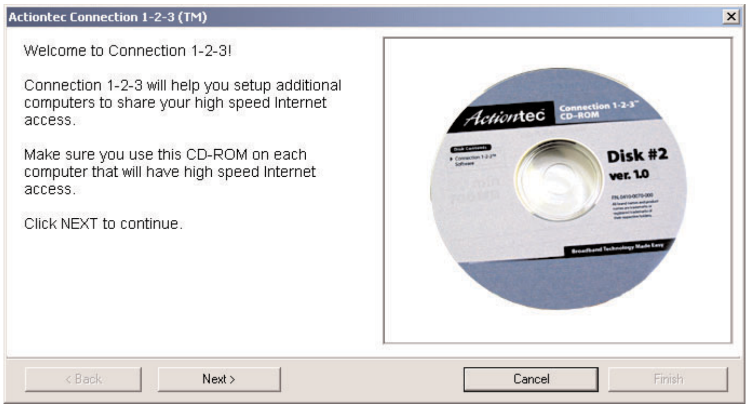
Cable/DSL Router
< Back
Next >
Cancel
Finish

11. Click **Finish**. The computer is now connected to the Router with a USB cable.

Connecting Wirelessly

Note: Computers to be added to the network wirelessly must have wireless capabilities (PCI wireless adapter, USB wireless adapter, etc.).

1. Insert the **Connection 1-2-3 CD** in the CD-ROM drive of the computer. When the following window appears, click **Next**.



Actiontec Connection 1-2-3 (TM)
Actiontec
Connection 1-2-3™ CD-ROM
Disk #2
ver. 1.0
< Back
Next >
Cancel
Finish

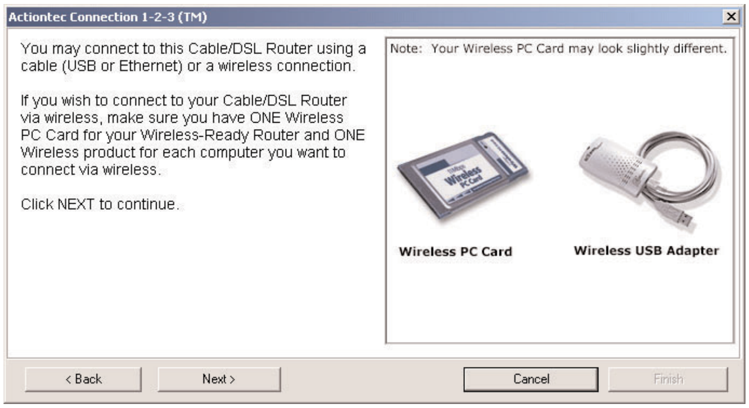
Welcome to Connection 1-2-3!

Connection 1-2-3 will help you setup additional computers to share your high speed Internet access.

Make sure you use this CD-ROM on each computer that will have high speed Internet access.

Click NEXT to continue.

2. Read the instructions in the next window, then click **Next**.



Actiontec Connection 1-2-3 (TM)
Wireless PC Card
Wireless USB Adapter
< Back
Next >
Cancel
Finish

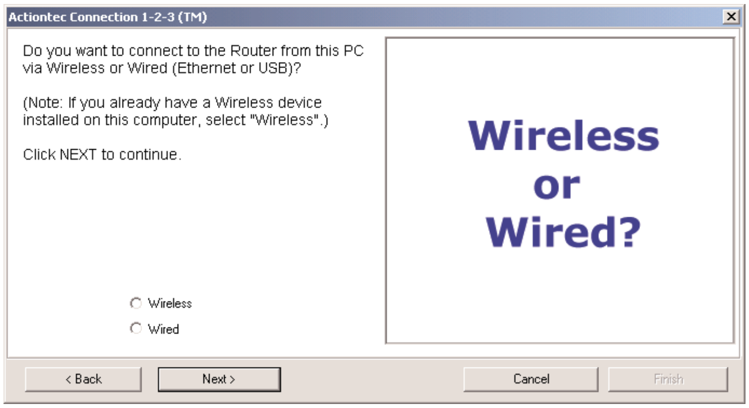
You may connect to this Cable/DSL Router using a cable (USB or Ethernet) or a wireless connection.

If you wish to connect to your Cable/DSL Router via wireless, make sure you have ONE Wireless PC Card for your Wireless-Ready Router and ONE Wireless product for each computer you want to connect via wireless.

Click NEXT to continue.

Note: Your Wireless PC Card may look slightly different.

3. Select **Wireless** in the next window, then click **Next**.



Actiontec Connection 1-2-3 (TM)
Wireless
or
Wired?
< Back
Next >
Cancel
Finish

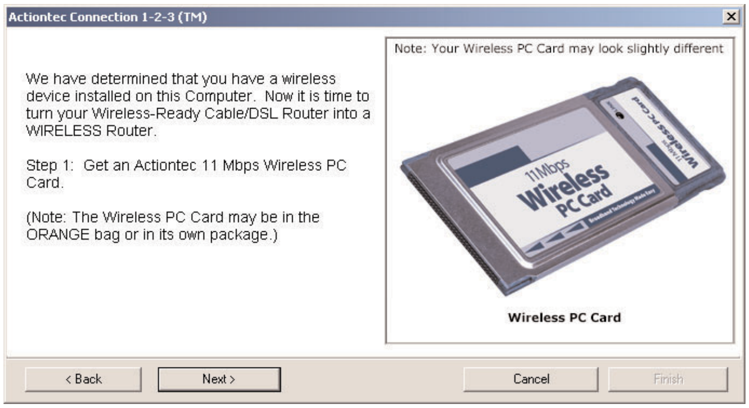
Do you want to connect to the Router from this PC via Wireless or Wired (Ethernet or USB)?

(Note: If you already have a Wireless device installed on this computer, select "Wireless".)

Click NEXT to continue.

○ Wireless
○ Wired

4. The following window appears. Read the instructions, then get the wireless card.



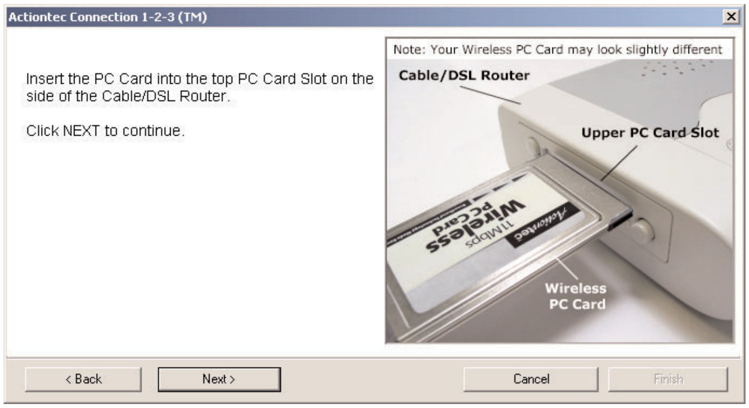
Actiontec Connection 1-2-3 (TM)
Note: Your Wireless PC Card may look slightly different
11Mbps
Wireless
PC Card
Wireless PC Card
< Back
Next >
Cancel
Finish

We have determined that you have a wireless device installed on this Computer. Now it is time to turn your Wireless-Ready Cable/DSL Router into a WIRELESS Router.

Step 1: Get an Actiontec 11 Mbps Wireless PC Card.

(Note: The Wireless PC Card may be in the ORANGE bag or in its own package.)

4. When the next window appears, insert the **PC Card** in the **upper PC Card slot** on the side of the Router.

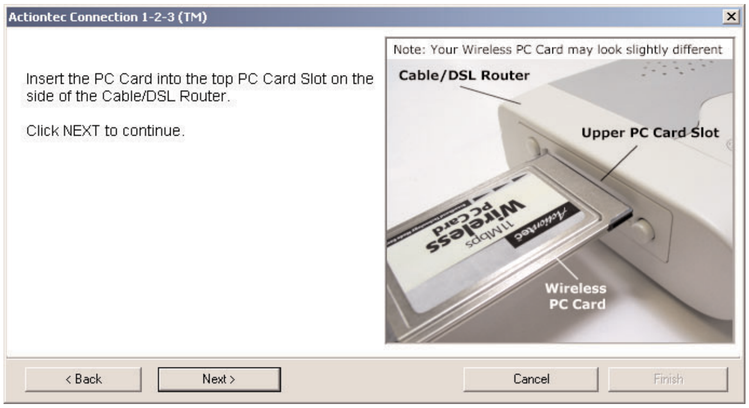


Actiontec Connection 1-2-3 (TM)
Note: Your Wireless PC Card may look slightly different
Cable/DSL Router
Upper PC Card Slot
Wireless
PC Card
< Back
Next >
Cancel
Finish

Insert the PC Card into the top PC Card Slot on the side of the Cable/DSL Router.

Click NEXT to continue.

5. Another window appears. Ensure the **Wireless light** on the front of the Router glows steadily green, then click **Next**.

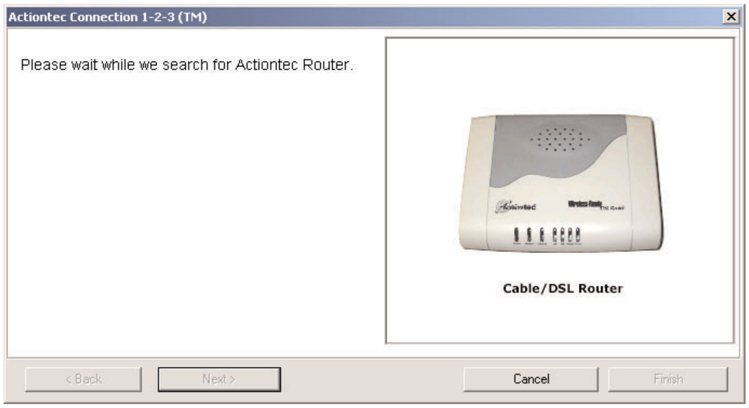


Actiontec Connection 1-2-3 (TM)
Note: Your Wireless PC Card may look slightly different
Cable/DSL Router
Upper PC Card Slot
Wireless
PC Card
< Back
Next >
Cancel
Finish

Insert the PC Card into the top PC Card Slot on the side of the Cable/DSL Router.

Click NEXT to continue.

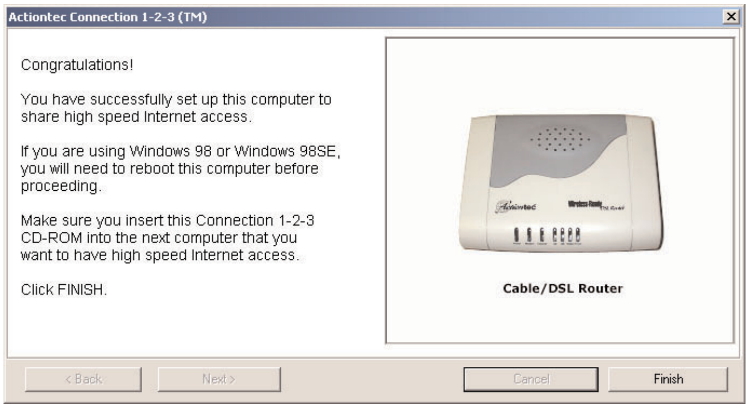
6. The next window appears as the Router is being located.



Please wait while we search for Actiontec Router.

Actiontec Connection 1-2-3 (TM)
Cable/DSL Router
< Back
Next >
Cancel
Finish

7. When the Router is located, a Congratulations window similar to the one shown below will appear.



Congratulations!

You have successfully set up this computer to share high speed Internet access.

If you are using Windows 98 or Windows 98SE, you will need to reboot this computer before proceeding.

Make sure you insert this Connection 1-2-3 CD-ROM into the next computer that you want to have high speed Internet access.

Click FINISH.

Actiontec Connection 1-2-3 (TM)
Cable/DSL Router
< Back
Next >
Cancel
Finish

8. Click **Finish**.

9. To connect a non-*Action*tec wirless adapter to the Router, enter the following in the wireless client's settings:

   Network name (SSID): ACTIONTEC

   Encryption: None, or disabled

   Refer to the documentation that came with the wireless adapter for more information on how to set the Network name (SSID) and encryption.

The computer is now connected to the Router wirelessly.

Using Custom Setup

3

This chapter contains information regarding the custom setup of the DSL Router, including wireless settings, port forwarding, and DMZ hosting.

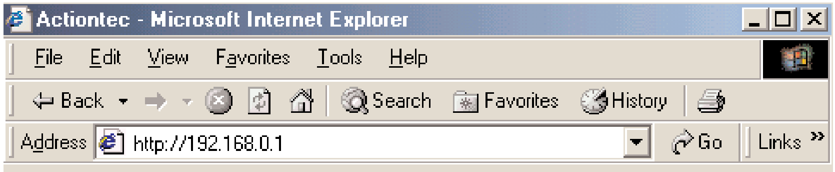
Accessing Custom Settings

To access the Custom Setup configuration screens:

1. Open your Web browser. In the address bar type

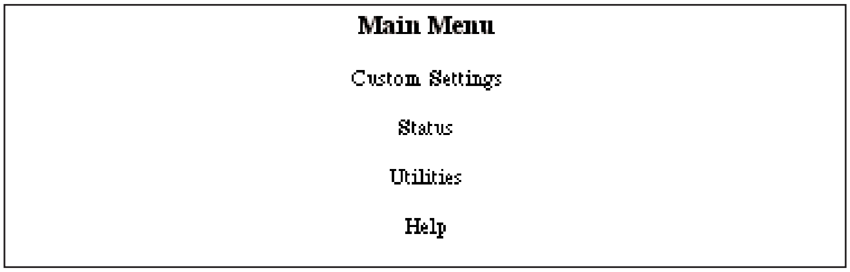
`http://192.168.0.1`

then press <**Enter**> on your keyboard.

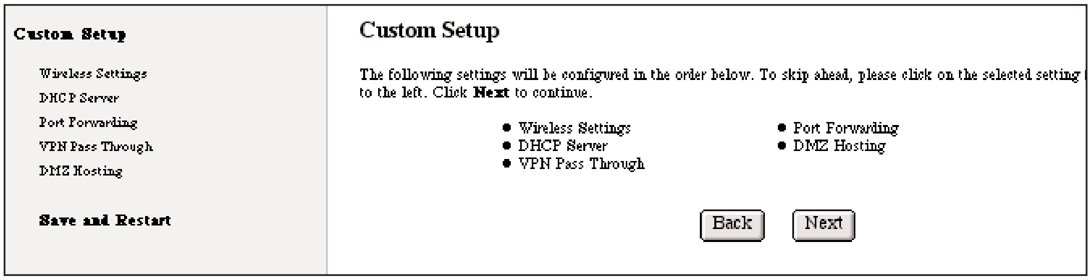

Actiontec - Microsoft Internet Explorer
File
Edit
View
Favorites
Tools
Help
Back
Search
Favorites
History
Address
Go
Links »

http://192.168.0.1

2. The “Main Menu” screen appears. Select **Custom Settings**.


Main Menu
Custom Settings
Status
Utilities
Help

3. The “Custom Setup” screen appears. To check all settings, or unsure of which setting to modify, select **Next**. To modify a specific configuration, click on its name in the menu on the left.


Custom Setup
Wireless Settings
DHCP Server
Port Forwarding
VPN Pass Through
DMZ Hosting
Save and Restart

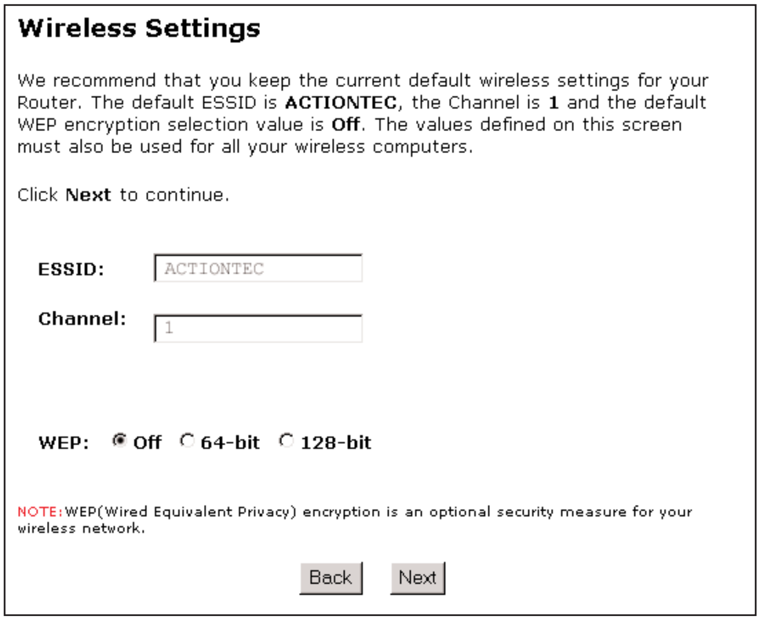
Custom Setup

The following settings will be configured in the order below. To skip ahead, please click on the selected setting to the left. Click **Next** to continue.

Wireless Settings
DHCP Server
VPN Pass Through
Port Forwarding
DMZ Hosting
Back
Next

Wireless Settings

Selecting **Wireless Settings** in the "Custom Setup" screen generates the "Wireless Settings" screen. Modify the wireless capabilities of the Router here.



Wireless Settings

We recommend that you keep the current default wireless settings for your Router. The default ESSID is **ACTIONTEC**, the Channel is **1** and the default WEP encryption selection value is **Off**. The values defined on this screen must also be used for all your wireless computers.

Click **Next** to continue.

ESSID: ACTIONTEC

Channel: 1

WEP: ● Off ○ 64-bit ○ 128-bit

NOTE: WEP(Wired Equivalent Privacy) encryption is an optional security measure for your wireless network.

ESSID

ESSID is the network name assigned to your wireless network. The factory default setting is "ACTIONTEC." Although *Action*tec recommends you keep the default value intact, you can change the ESSID value, using any combination of alphanumeric characters (i.e., A-Z, a-z, 0-9). **All wireless-capable computers included on the Router's wireless network must have this same ESSID value**. (For the *Action*tec 11 Mbps Wireless PC Card, the ESSID value must be the same as the SSID value.)

Channel

Channel assigns the frequency band at which the Router communicates. The factory default value is set to 1.

Wireless Equivalent Privacy

Wireless Equivalent Privacy (WEP) is an encryption method used with the 802.11b standard to ensure data security over wireless networks. The Router offers three levels of WEP: Off, 64-bit, and 128-bit. If you do not require encryption, *Action*tec recommends you select **Off** (the factory default setting). Encryption is not required for wireless operation, and can reduce network performance. If you select **64-bit** or **128-bit** encryption, click **Next** to continue WEP configuration.

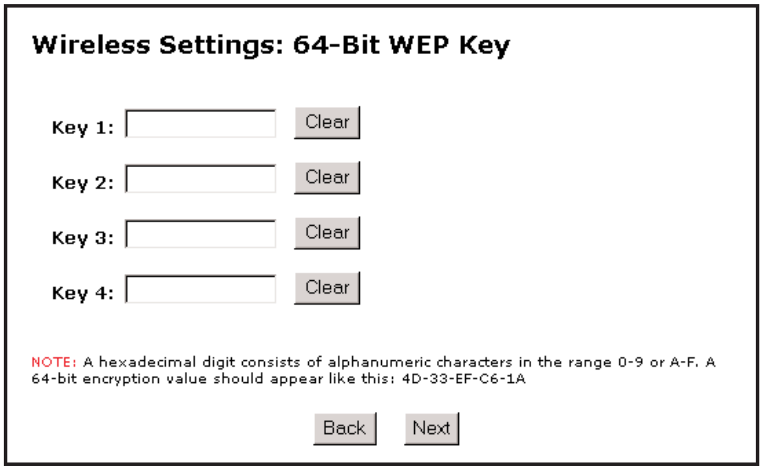
Off

Selecting **Off** disables encryption. Selecting this option allows any computer with wireless capability and the correct ESSID value to join your wireless network.

64-bit WEP

64-bit WEP requires four separate keys. Each key comprises five hexadecimal digit pairs. A hexadecimal digit consists of an alphanumeric character ranging from 0-9 or A-F. An example of a 64-bit WEP key is: 4E-A3-3D-68-72. To create a set of 64-bit WEP keys, enter five hexadecimal digit pairs in each **Key** text box (**Key 1:**, **Key 2:**, **Key 3:**, **Key 4:**). After you activate 64-bit WEP on the Router, a computer with wireless capability can join the network only if these same keys are entered in the computer's wireless encryption scheme.

Note: If the WEP keys on the Router have been changed, the WEP keys on any wireless clients must also be changed, or they will not be able to access the Router.



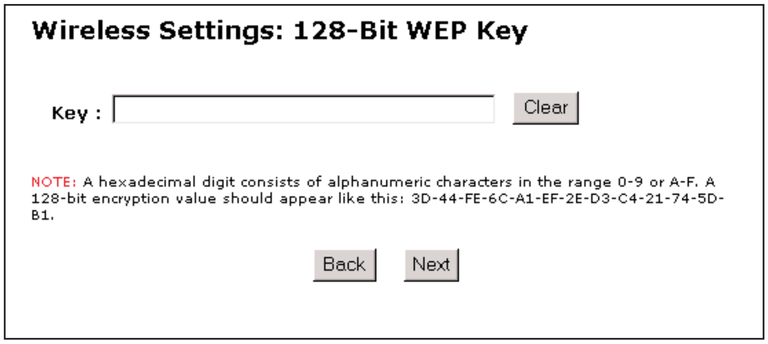
Wireless Settings: 64-Bit WEP Key

NOTE: A hexadecimal digit consists of alphanumeric characters in the range 0-9 or A-F. A 64-bit encryption value should appear like this: 4D-33-EF-C6-1A

128-bit WEP

128-bit WEP requires one key of 13 hexadecimal pairs. A hexadecimal digit consists of alphanumeric characters ranging from 0-9 or A-F. An example of a 128-bit WEP key is: 3D-44-FE-6C-A1-EF-2E-D3-C4-21-74-5D-B1. To create a 128-bit WEP key, enter 13 hexadecimal digit pairs in the **Key:** text box. After you activate 128-bit WEP on the Router, a computer with wireless capability can join the network only if this key is entered in the computer's wireless encryption scheme.

☞ ***Note***: If the WEP keys on the Router have been changed, the WEP keys on any wireless clients must also be changed, or they will not be able to access the Router.



Wireless Settings: 128-Bit WEP Key

Key :

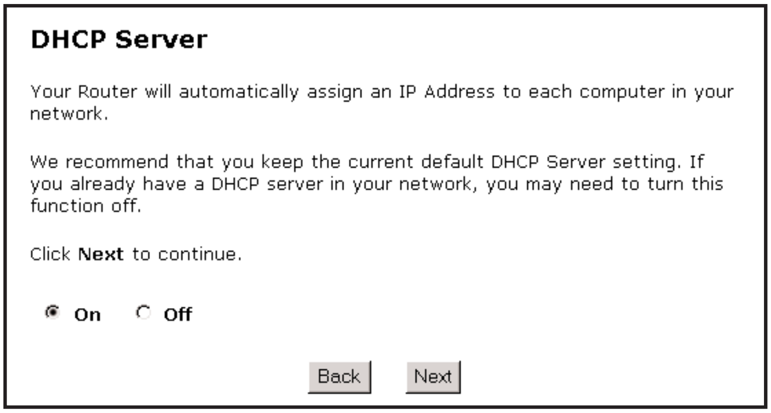
NOTE: A hexadecimal digit consists of alphanumeric characters in the range 0-9 or A-F. A 128-bit encryption value should appear like this: 3D-44-FE-6C-A1-EF-2E-D3-C4-21-74-5D-B1.

☞ ***Note***: Not all wireless PC Cards support 128-bit WEP. Ensure that all PC Cards on your networked computers support 128-bit WEP before activating.

DHCP Server

Selecting **DHCP Server** in the "Custom Setup" screen generates the "DHCP Server" screen. The Router has a built-in DHCP (Dynamic Host Configuration Protocol) server that automatically assigns a different IP address to each computer on your network, eliminating IP address conflicts.

The factory default setting is **On**. To disable the DHCP Server, select **Off**.



DHCP Server

Your Router will automatically assign an IP Address to each computer in your network.

We recommend that you keep the current default DHCP Server setting. If you already have a DHCP server in your network, you may need to turn this function off.

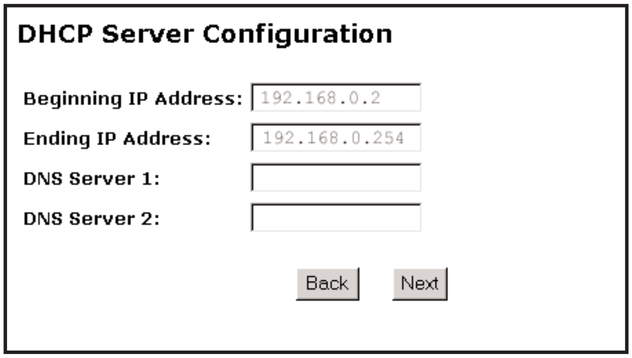
Click **Next** to continue.

● **On** ○ **Off**

*Action*tec strongly recommends leaving the DHCP Server option **On**. If the DHCP Server option is **Off**, ensure the IP addresses of the networked computers are on the same subnet as the IP address of the Router. For more information, see "DHCP Server Configuration" below.

DHCP Server Configuration

Clicking **Next** in the "DHCP Server" screen generates the "DHCP Server Configuration" screen. Change IP address range and DNS server information here.



DHCP Server Configuration

Beginning IP Address: 192.168.0.2
Ending IP Address: 192.168.0.254
DNS Server 1:
DNS Server 2:

Beginning IP Address - the IP address at which the DHCP server starts assigning IP addresses. *Action*tec recommends keeping the factory default setting (192.168.0.2).

Ending IP Address - the IP Address at which the DHCP Server stops assigning IP addresses. *Action*tec recommends keeping the factory default settings (192.168.0.254).

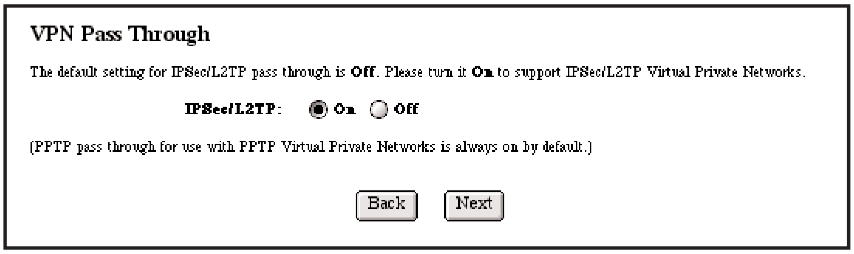
The beginning and ending IP addresses define the IP address range of the Router. If the default values are left intact, the Router supplies a unique IP address between 192.168.0.2 and 192.168.0.254 to each computer on its network. Note that the first three groups of numbers of the addresses are identical; this means they are on the same subnet. The IP address of the Router must be on the same subnet as the IP address range it generates. For instance, if the Router's IP address is changed to 111.33.222.1, set the beginning IP address to 111.33.222.2, and the ending IP address to 111.33.222.254.

DNS Server 1 - the primary DNS server provided by the ISP. If the ISP provided DNS server information, enter it here. If not, leave the text box intact.

DNS Server 2 - the secondary DNS provided by the ISP. If the ISP provided secondary DNS server information, enter it here. If not, leave the text box intact.

VPN Pass Through

Selecting **VPN Pass Through** in the "Custom Setup" screen generates the "VPN Pass Through" window. To allow Virtual Private Networking (VPN) using IPSec/L2TP (with multiple, client-initiated pass-through sessions), click **On**. Note that VPN using PPTP is always on by default.



VPN Pass Through

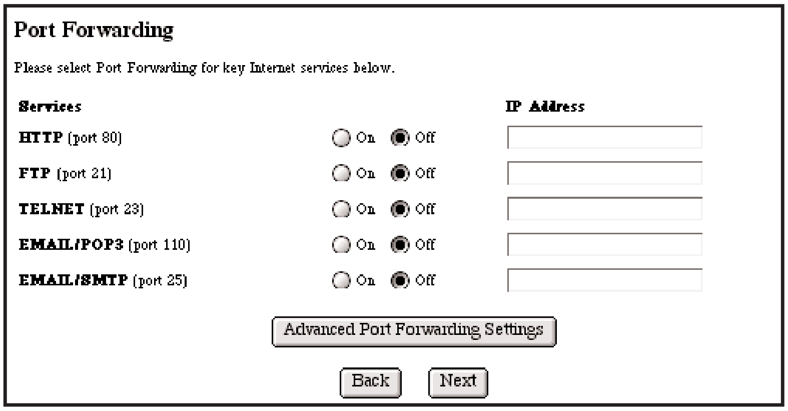
The default setting for IPSec/L2TP pass through is **Off**. Please turn it **On** to support IPSec/L2TP Virtual Private Networks.

IPSec/L2TP: ● **On** ○ **Off**

(PPTP pass through for use with PPTP Virtual Private Networks is always on by default.)

Port Forwarding

Selecting **Port Forwarding** in the "Custom Setup" screen generates the "Port Forwarding" screen. Port forwarding allows certain programs to bypass the Router's built-in firewall to access parts of the network (for hosting a Web or ftp server, for example). To use port forwarding, select one of the Internet services listed, activate it by clicking on its "On" radio button, then enter the IP address of the computer on the network receiving the selected service.



Port Forwarding

Please select Port Forwarding for key Internet services below.

Services		**IP Address**
HTTP (port 80)	○ On ● Off	
FTP (port 21)	○ On ● Off	
TELNET (port 23)	○ On ● Off	
EMAIL/POP3 (port 110)	○ On ● Off	
EMAIL/SMTP (port 25)	○ On ● Off	

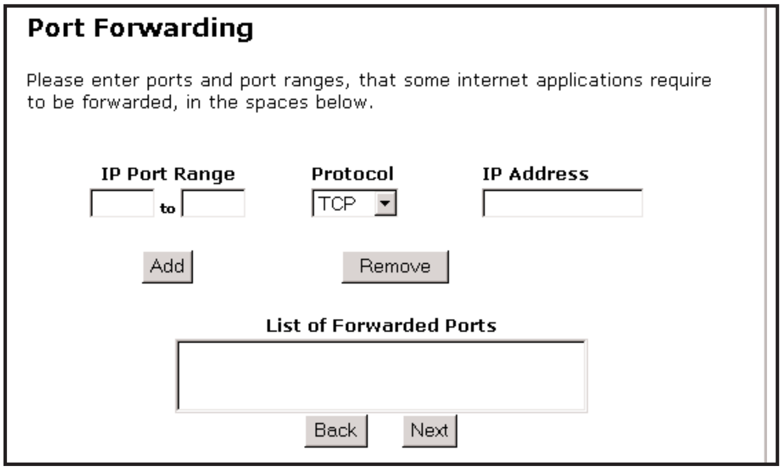
Advanced Port Forwarding Settings

Clicking **Advanced Port Forwarding Settings** generates the "Advanced Port Forwarding" screen. This screen allows the user more control over port forwarding settings. To configure:

1. Enter the IP port range in the "IP Port Range" text boxes. (If more than 10 ports are needed, *Action*tec recommends using DMZ Hosting. See "DMZ Hosting.")

2. Select the protocol type from the "Protocol" list box.
3. Enter the IP address of the computer on the network to be used as a host, then click **Add**. The forwarded ports appear in the "List of Forwarded Ports" text box.

To remove forwarded ports, highlight them then click **Remove**.

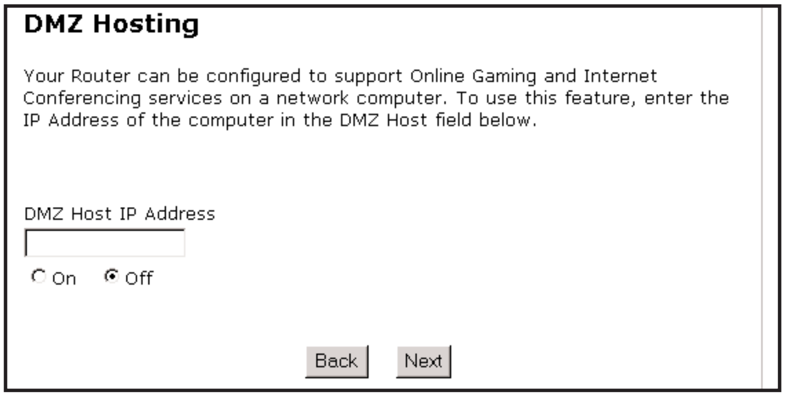


Port Forwarding

Please enter ports and port ranges, that some internet applications require to be forwarded, in the spaces below.

DMZ Hosting

Selecting **DMZ Hosting** in the "Custom Setup" screen generates the "DMZ Hosting" screen. To use DMZ hosting, enter the IP address of the computer on the network to be used as a DMZ host in the "DMZ Host IP Address" text box, then click **On**.



DMZ Hosting

Your Router can be configured to support Online Gaming and Internet Conferencing services on a network computer. To use this feature, enter the IP Address of the computer in the DMZ Host field below.

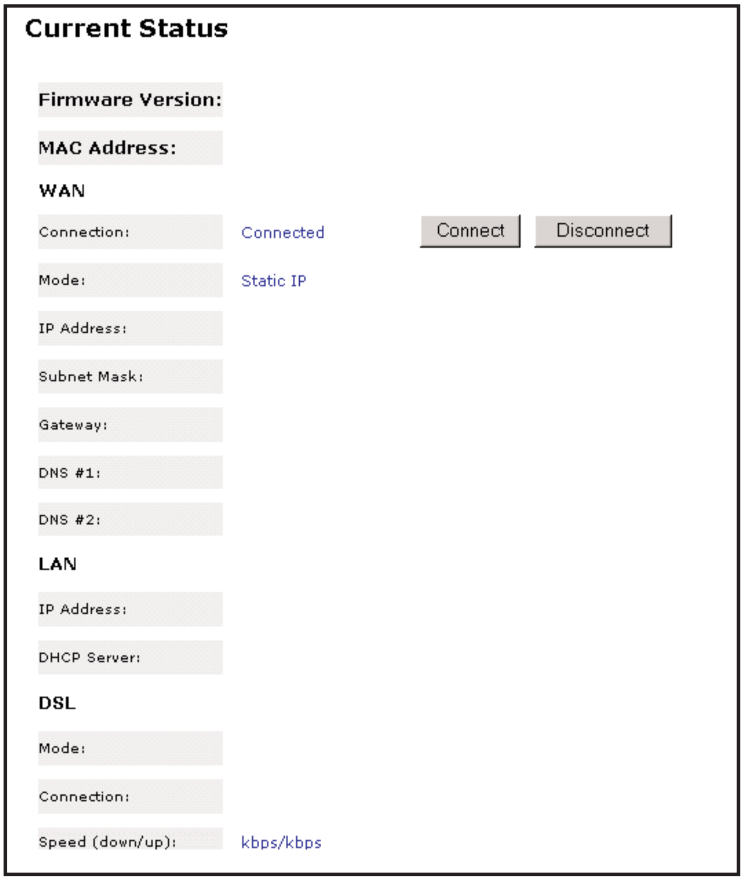
DMZ Host IP Address

○ On ● Off

DMZ hosting is used to support online gaming and Internet conferencing services. These programs usually require multiple open ports, making the network accessible from the Internet. DMZ hosting symbolically places the DMZ host computer outside of the Router's network. Access to network resources is unavailable while DMZ hosting is active. *Action*tec recommends activating DMZ hosting only as long as necessary.

Status

After configuring the Router, settings can be viewed by selecting **Status** in the Main Menu. The “Current Status” screen appears, displaying many of the Router’s settings. No settings (other than connecting or disconnecting from the Internet) can be changed from the Current Status screen.



Current Status

Firmware Version:

MAC Address:

WAN

Connection: Connected

Mode: Static IP

IP Address:

Subnet Mask:

Gateway:

DNS #1:

DNS #2:

LAN

IP Address:

DHCP Server:

DSL

Mode:

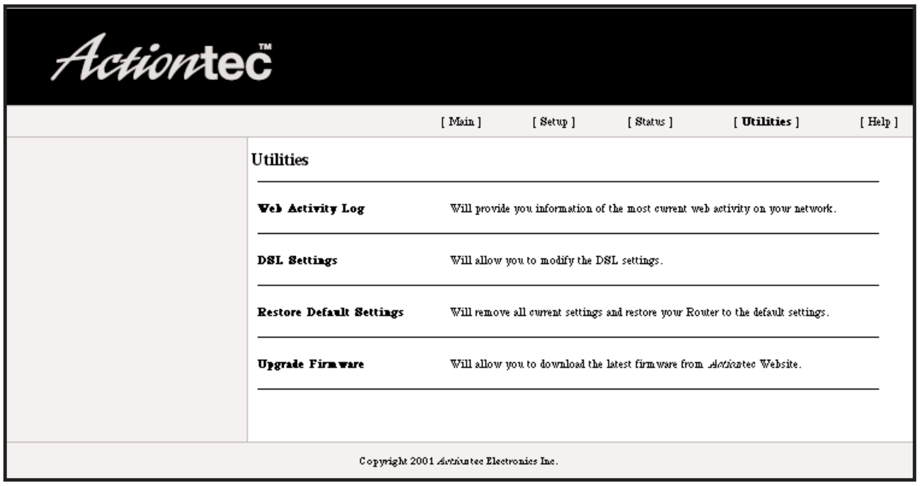
Connection:

Speed (down/up): kbps/kbps

Using Utilities

4

To access the Routers' Web-based Utilities, select **Utilities** from the "Main Menu" screen. The "Utilities" screen appears.


Actiontec
[Main]
[Setup]
[Status]
[Utilities]
[Help]

Utilities

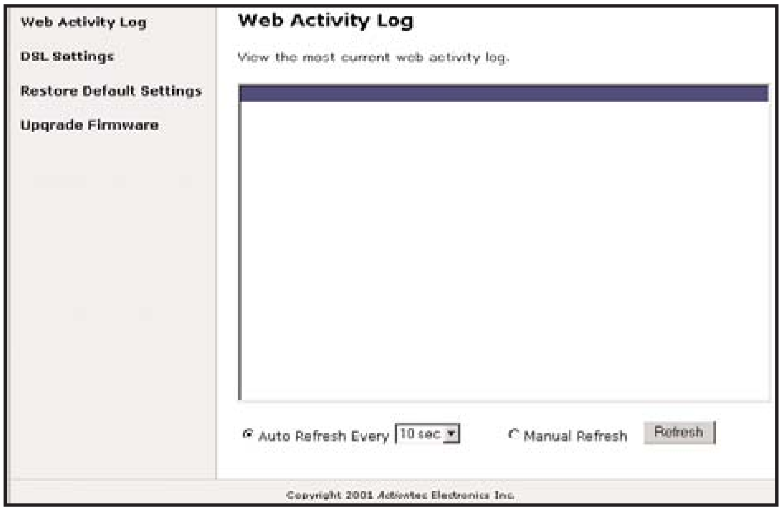
Web Activity Log	Will provide you information of the most current web activity on your network.
DSL Settings	Will allow you to modify the DSL settings.
Restore Default Settings	Will remove all current settings and restore your Router to the default settings.
Upgrade Firmware	Will allow you to download the latest firmware from Actiontec Website.

Copyright 2001 Actiontec Electronics Inc.

From this screen, the Web activity log can be viewed, the DSL settings changed, the Router's factory default settings restored, and the Router's firmware upgraded.

Web Activity Log

The Web Activity Log provides information about the Web sites each computer on the Router's network has visited. To access the Web Activity Log, select **Web Activity Log** from the "Utilities" screen.


Web Activity Log
DSL Settings
Restore Default Settings
Upgrade Firmware
○ Manual Refresh
Refresh

Web Activity Log

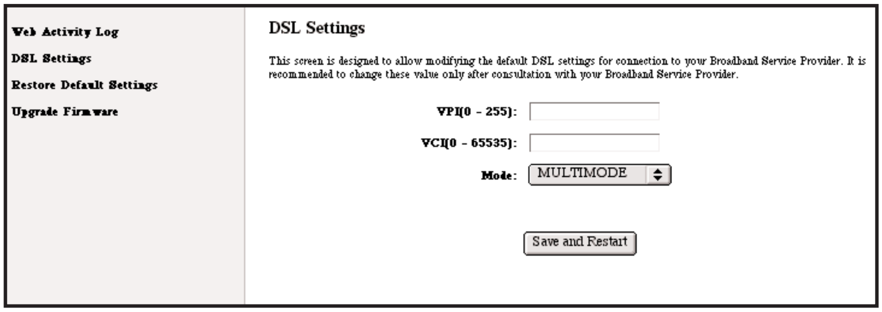
View the most current web activity log.

● Auto Refresh Every 10 sec

Copyright 2001 Actiontec Electronics Inc.

DSL Settings

To access DSL Settings, select **DSL Settings** from the “Utilities” screen. The Router’s VPI, VCI, and Mode settings can be changed from this screen. *Action*tec recommends not changing these values without consulting the ISP.


Web Activity Log
DSL Settings
Restore Default Settings
Upgrade Firmware
Save and Restart

DSL Settings

This screen is designed to allow modifying the default DSL settings for connection to your Broadband Service Provider. It is recommended to change these value only after consultation with your Broadband Service Provider.

VPI(0 - 255):

VCI(0 - 65535):

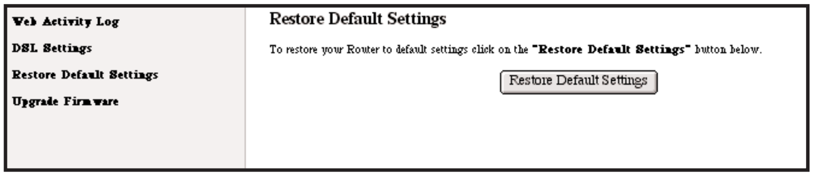
Mode: MULTIMODE

Restore Default Settings

To restore the Router to its factory default settings, select **Restore Default Settings** from the “Utilities” screen. When the “Restore Default Settings” screen appears, click **Restore Default Settings**. Any changes made to the Router’s settings in the Custom Setup screens will be lost and the factory default settings will be restored. During this process, the Router’s power LED flashes and the Router is disabled.

> ***Warning***: Do not unplug the power cord from the Router during the Restore Default Settings process. Doing so may result in permanent damage to the Router.

When the Power LED stops flashing and glows steadily green, the Router is fully operational.

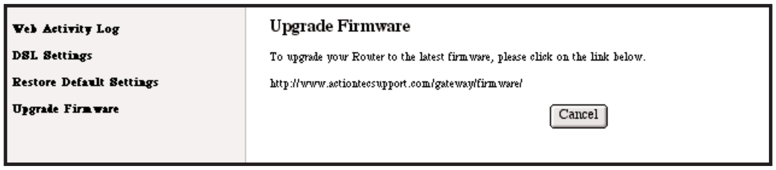

Web Activity Log
DSL Settings
Restore Default Settings
Upgrade Firmware
Restore Default Settings

Restore Default Settings

To restore your Router to default settings click on the "Restore Default Settings" button below.

Upgrade Firmware

Selecting **Upgrade Firmware** in the “Utilities” screen generates the “Upgrade Firmware” screen. *Action*tec periodically posts firmware upgrades to enhance the Router’s capabilities.



Upgrade Firmware

To upgrade your Router to the latest firmware, please click on the link below.

http://www.actiontecsupport.com/gateway/firmware/

To upgrade the Router’s firmware:

1. Click the link in the “Upgrade Firmware” window and download the upgrade files to the hard drive of the computer.
2. Double-click on the upgrade file (upgrade.exe).
3. Click **Start**. The upgrade process begins.

> ***Warning***: Do not unplug the power cord from the Router during the Upgrade Firmware process. Doing so may result in permanent damage to the Router.

4. After the upgrade is complete, unplug the power cord from the Router, then plug it back in again.
5. When the Power LED stops flashing and glows steadily green, the Router is fully operational.
6. Reconfigure the Router settings.

Troubleshooting

5

This chapter contains a list of problems that may be encountered while using the Router, and solutions to overcome the problem.

LAN Connection Failure

- Ensure the Router is properly installed, the LAN connections are correct, and the power is on.
- If an Ethernet cable is being used to connect the Router, ensure that it is a crossover type cable, not a straight-through cable.
- Ensure the LAN LED is on. If not, check the LAN connections.
- Ensure the Subnet Mask address is set to 255.255.255.0 by clicking **Status** in the "Main Menu" screen.

Cannot Connect to the Internet

- Ensure both ends of the power cord and yellow or purple cables are properly connected and the status LEDs on the front panel are working properly.
- If running Windows 98, check the computer's TCP/IP settings. Select **Start**, **Run**, then enter

  ```
  winipcfg
  ```

  in the "Open" text box. Press **Enter** on the keyboard. The computer should have an IP address in the default range (192.168.1.2 through 198.168.1.254).
- Ensure the Subnet Mask address is set to 255.255.255.0 by clicking **Status** in the "Main Menu" screen.
- Verify the Router's settings are the same as the computer by clicking **Status** in the "Main Menu" screen.

Time out error occurs when entering a URL or IP Address

- Verify the computers are working properly.
- Ensure the IP settings are correct.
- Ensure the Router is on and connected properly.
- Verify the Modem LED is lit. If not, check all connections
- Verify the Router's settings are the same as the computer by clicking **Status** in the "Main Menu" screen.
- Check the cable/DSL modem by attempting to connect to the Internet.

Router and computer will not connect wirelessly

- Verify the Router is powered up and the wireless card is inserted properly.
- Ensure there are no other wireless access points in the vicinity.
- Ensure the wireless card installed in the computer has an SSID identical to that of the Router. The default ESSID setting of the Router is "ACTIONTEC."
- Ensure the wireless client and the Router are set to the same encryption scheme.

Setting Up Static IP Address

A

To communicate with the Router from a computer on the network (to use the Web Configuration Utility, for example), the user may have to switch the IP address settings from DHCP-enabled to static IP, so that the computer and the Router are on the same subnet.

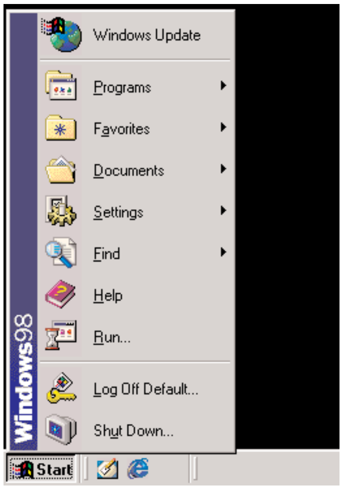
To set up static IP on a computer, select the operating system and follow the instructions.

☞ ***Note***: The following procedures are based on the Router's factory default IP address. If the Router's IP address has been changed, enter the new IP address when instructed to enter an IP address.

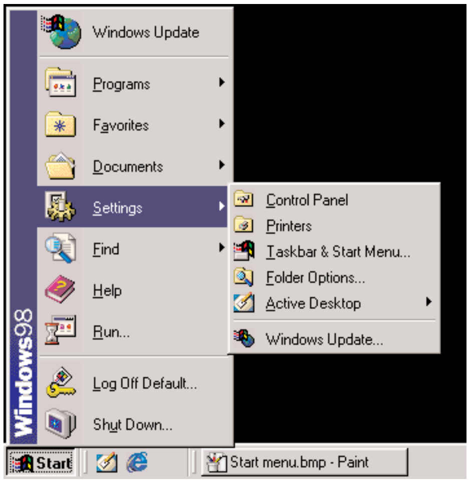
Windows 98 and 98 SE

1. From the desktop, click on the **Start** button in the lower left corner.

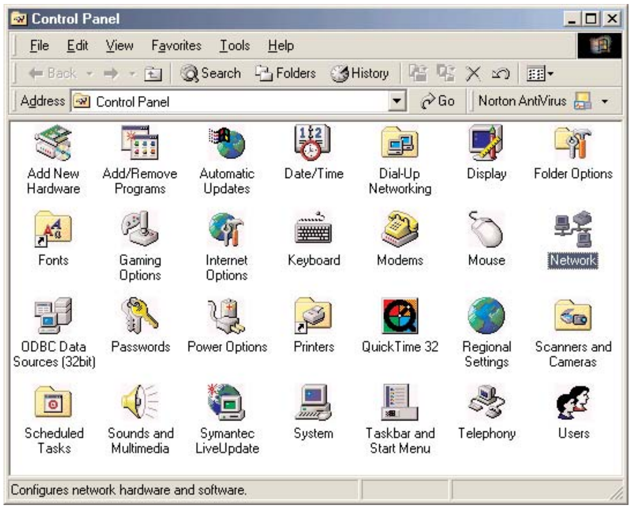
2. From the menu that appears, select **Settings**.


Windows Update
Programs
Favorites
Documents
Settings
Find
Help
Run...
Log Off Default...
Shut Down...
Windows98
Start

3. Another menu appears. Select **Control Panel**.

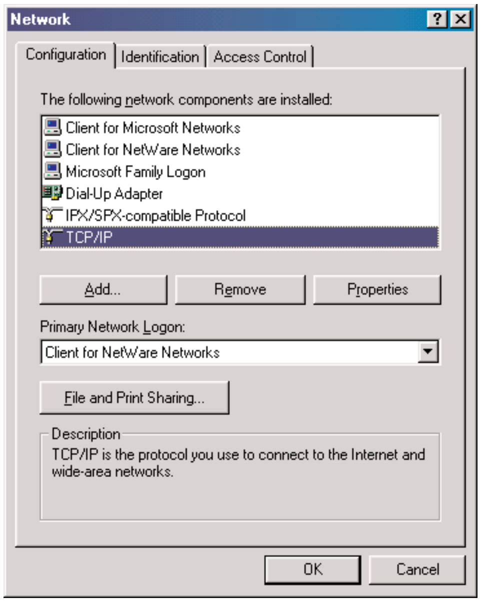

Windows98
Windows Update
Programs
Favorites
Documents
Settings
Find
Help
Run...
Log Off Default...
Shut Down...
Control Panel
Printers
Taskbar & Start Menu...
Folder Options...
Active Desktop
Windows Update...
Start
Start menu.bmp - Paint

4. When the “Control Panel” window appears, double-click **Network**.


Control Panel
File Edit View Favorites Tools Help
Back Search Folders History
Address Control Panel
Go
Norton AntiVirus
Add New Hardware
Add/Remove Programs
Automatic Updates
Date/Time
Dial-Up Networking
Display
Folder Options
Fonts
Gaming Options
Internet Options
Keyboard
Modems
Mouse
Network
ODBC Data Sources (32bit)
Passwords
Power Options
Printers
QuickTime 32
Regional Settings
Scanners and Cameras
Scheduled Tasks
Sounds and Multimedia
Symantec LiveUpdate
System
Taskbar and Start Menu
Telephony
Users

Configures network hardware and software.

5. The “Network” window appears. In the "The following network components are installed" list box, locate and double-click **TCP/IP**.


Network
Configuration
Identification
Access Control
Add...
Remove
Properties
File and Print Sharing...
OK
Cancel

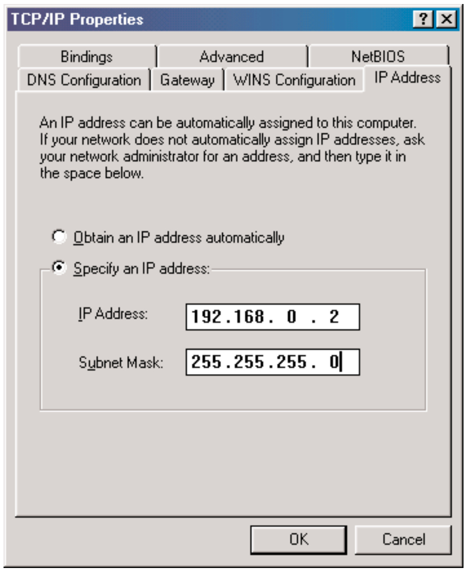
The following network components are installed:

- Client for Microsoft Networks
- Client for NetWare Networks
- Microsoft Family Logon
- Dial-Up Adapter
- IPX/SPX-compatible Protocol
- TCP/IP

Primary Network Logon: Client for NetWare Networks

Description
TCP/IP is the protocol you use to connect to the Internet and wide-area networks.

6. The “TCP/IP Properties” window appears. Select **IP Address**.


TCP/IP Properties
Bindings
Advanced
NetBIOS
DNS Configuration
Gateway
WINS Configuration
IP Address
OK
Cancel

An IP address can be automatically assigned to this computer. If your network does not automatically assign IP addresses, ask your network administrator for an address, and then type it in the space below.

○ Obtain an IP address automatically
● Specify an IP address:

IP Address: 192.168. 0 . 2
Subnet Mask: 255.255.255. 0

7. In the IP Address tab, make sure the the circle next to “Specify an IP Address” is selected. When active, a black dot appears in the circle. If the circle already contains a black dot, leave it alone.

8. Enter the following numbers in the “IP Address” text box:

`192.168.0.2`

Do not include the periods; they are automatically entered.

9. Enter the following numbers in the "Subnet mask" text box:

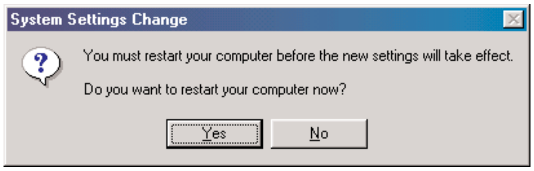
`255.255.255.0`

Do not include the periods; they are automatically entered.

10. Click **OK**. The TCP/IP Properties window disappears.

11. In the Network window, click **OK**. The Network window disappears.

12. The "System Settings Change" window appears, asking whether the computer should be restarted. Click **Yes**.



System Settings Change

You must restart your computer before the new settings will take effect.

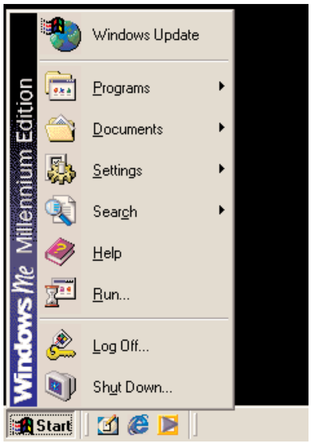
Do you want to restart your computer now?

The computer restarts. It is now set up with a static IP address, allowing the user to access the Router's Advanced Setup utility.

Windows Me

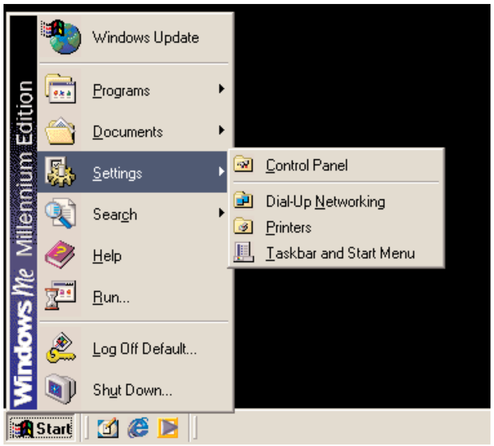
1. From the desktop, click on the **Start** button in the lower left corner.

2. From the menu that appears, select **Settings**.

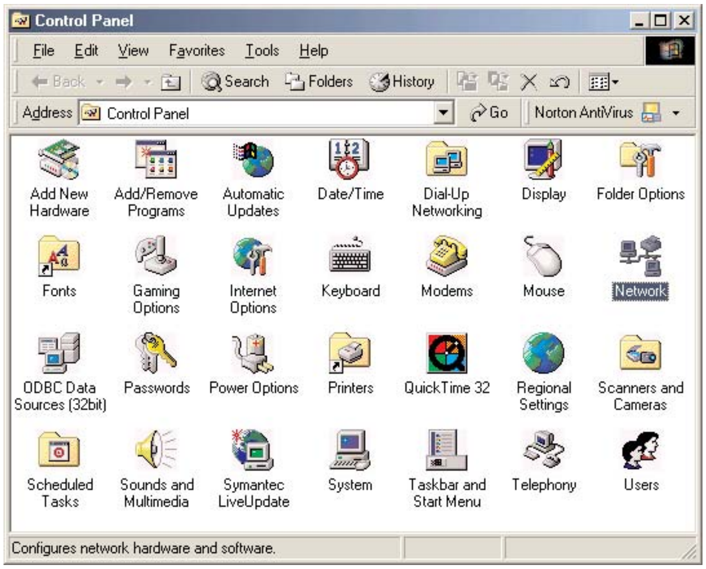


Windows Update
Programs
Documents
Settings
Search
Help
Run...
Log Off...
Shut Down...
Windows Me Millennium Edition
Start

3. Another menu appears. Select **Control Panel**.

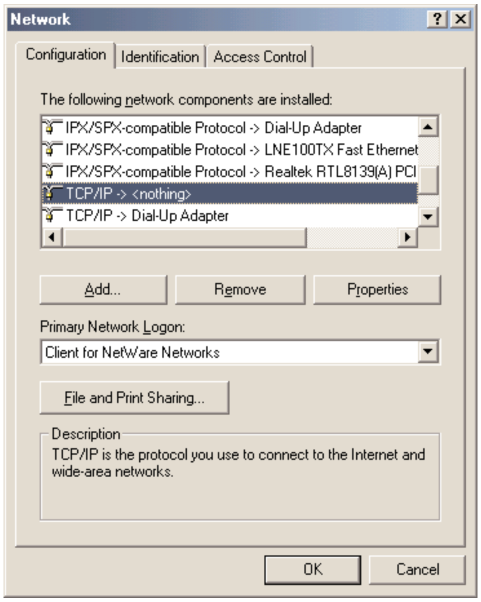

Windows Me Millennium Edition
Windows Update
Programs
Documents
Settings
Search
Help
Run...
Log Off Default...
Shut Down...
Control Panel
Dial-Up Networking
Printers
Taskbar and Start Menu
Start

4. When the “Control Panel” window appears, double-click **Network**.


Control Panel
File Edit View Favorites Tools Help
Back Search Folders History
Address Control Panel Go Norton AntiVirus
Add New Hardware
Add/Remove Programs
Automatic Updates
Date/Time
Dial-Up Networking
Display
Folder Options
Fonts
Gaming Options
Internet Options
Keyboard
Modems
Mouse
Network
ODBC Data Sources (32bit)
Passwords
Power Options
Printers
QuickTime 32
Regional Settings
Scanners and Cameras
Scheduled Tasks
Sounds and Multimedia
Symantec LiveUpdate
System
Taskbar and Start Menu
Telephony
Users

Configures network hardware and software.

5. The “Network” window appears. In the “The following network components are installed” list box, locate and double-click **TCP/IP**.


Network
?
Configuration
Identification
Access Control
Add...
Remove
Properties
File and Print Sharing...
OK
Cancel

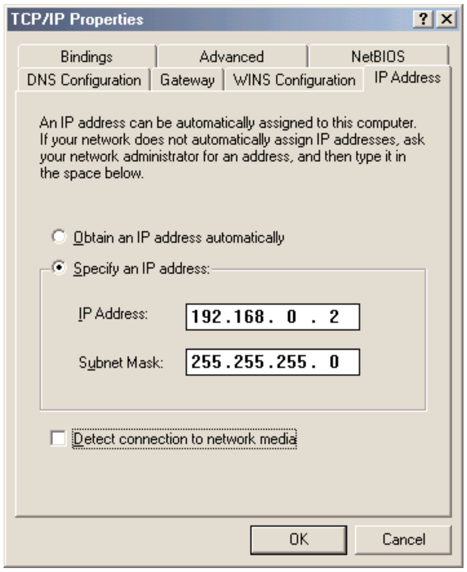
The following network components are installed:

- IPX/SPX-compatible Protocol -> Dial-Up Adapter
- IPX/SPX-compatible Protocol -> LNE100TX Fast Ethernet
- IPX/SPX-compatible Protocol -> Realtek RTL8139(A) PCI
- TCP/IP -> <nothing>
- TCP/IP -> Dial-Up Adapter

Primary Network Logon: Client for NetWare Networks

Description
TCP/IP is the protocol you use to connect to the Internet and wide-area networks.

6. The “TCP/IP Properties” window appears. Click **IP Address**.


TCP/IP Properties
?
Bindings
Advanced
NetBIOS
DNS Configuration
Gateway
WINS Configuration
IP Address
OK
Cancel

An IP address can be automatically assigned to this computer. If your network does not automatically assign IP addresses, ask your network administrator for an address, and then type it in the space below.

○ Obtain an IP address automatically

● Specify an IP address:

IP Address: 192.168. 0 . 2

Subnet Mask: 255.255.255. 0

☐ Detect connection to network media

7. In the IP Address tab, make sure the the circle next to “Specify an IP Address” is selected. When active, a black dot appears in the circle. If the circle already contains a black dot, leave it alone.

8. Enter the following numbers in the “IP Address” text box:

`192.168.0.2`

Do not include the periods; they are automatically entered.

9. Enter the following numbers in the "Subnet mask" text box:

   `255.255.255.0`

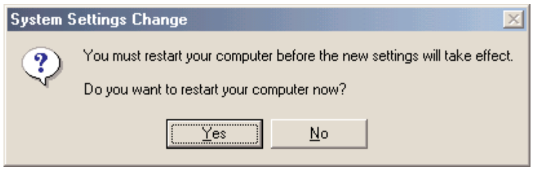
   Do not include the periods; they are automatically entered.

10. Click **OK**. The TCP/IP Properties window disappears.

11. If there is a check in the box next to "Detect connection to network media," click on it to uncheck the box.

12. In the Network window, click **OK**. The Network window disappears.

13. The "System Settings Change" window appears, asking whether the computer should be restarted. Click **Yes**.



System Settings Change

You must restart your computer before the new settings will take effect.

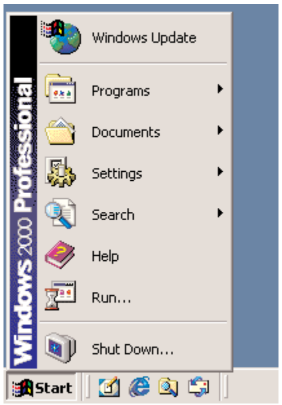
Do you want to restart your computer now?

The computer restarts. It is now set up with a static IP address, allowing the user to access the Router's Advanced Setup utility.

Windows 2000

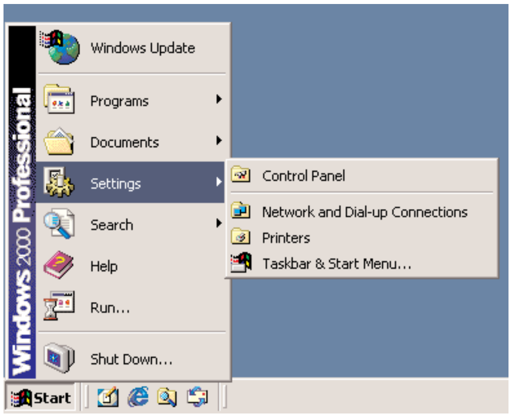
1. From the desktop, click on the **Start** button in the lower left corner.

2. From the menu that appears, select **Settings**.

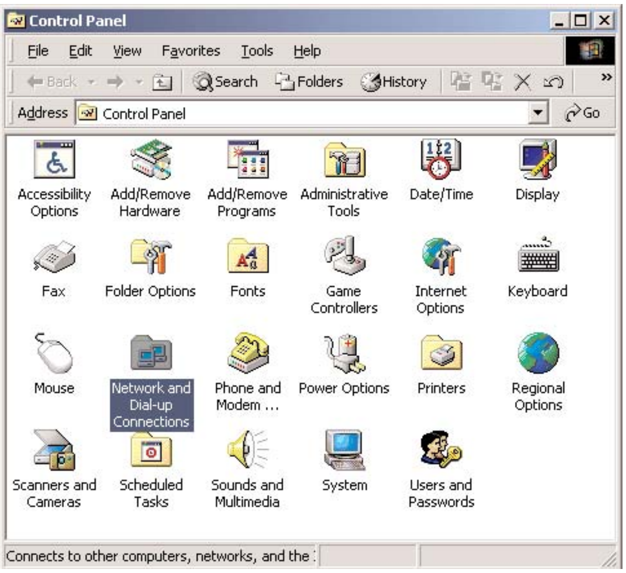


Windows 2000 Professional
Windows Update
Programs
Documents
Settings
Search
Help
Run...
Shut Down...
Start

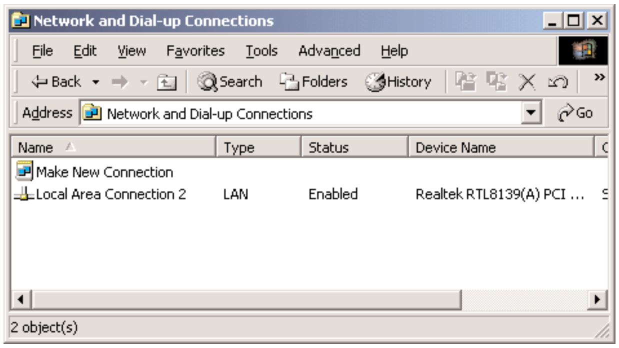
3. Another menu appears. Select **Control Panel**.


Windows 2000 Professional
Windows Update
Programs
Documents
Settings
Search
Help
Run...
Shut Down...
Start
Control Panel
Network and Dial-up Connections
Printers
Taskbar & Start Menu...

4. When the “Control Panel” window appears, double-click **Network and Dial-up Connections**.


Control Panel
File Edit View Favorites Tools Help
Back Search Folders History
Address Control Panel
Go
Accessibility Options
Add/Remove Hardware
Add/Remove Programs
Administrative Tools
Date/Time
Display
Fax
Folder Options
Fonts
Game Controllers
Internet Options
Keyboard
Mouse
Network and Dial-up Connections
Phone and Modem ...
Power Options
Printers
Regional Options
Scanners and Cameras
Scheduled Tasks
Sounds and Multimedia
System
Users and Passwords
Connects to other computers, networks, and the

5. In the "Network and Dial-up Connections" window, double-click **Local Area Connection**. A number may be displayed after the Local Area Connection. If there is more than one Local Area Connection listed, locate the one that corresponds to the network card installed in the computer by finding the name of the network card in the **Device Name** column.

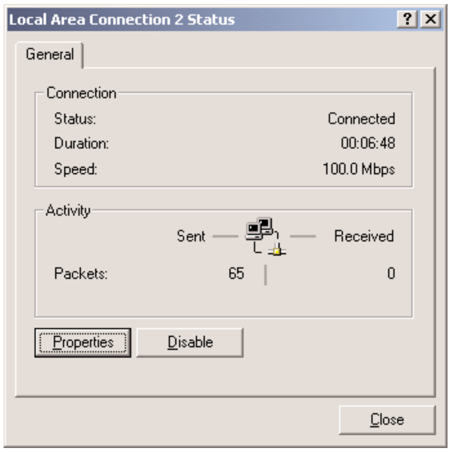

Network and Dial-up Connections
File
Edit
View
Favorites
Tools
Advanced
Help
Back
Search
Folders
History
Address
Go

Address: Network and Dial-up Connections

Name	Type	Status	Device Name
Make New Connection			
Local Area Connection 2	LAN	Enabled	Realtek RTL8139(A) PCI ...

2 object(s)

6. The "Local Area Connection Status" window appears. Select **General**, then click **Properties**.

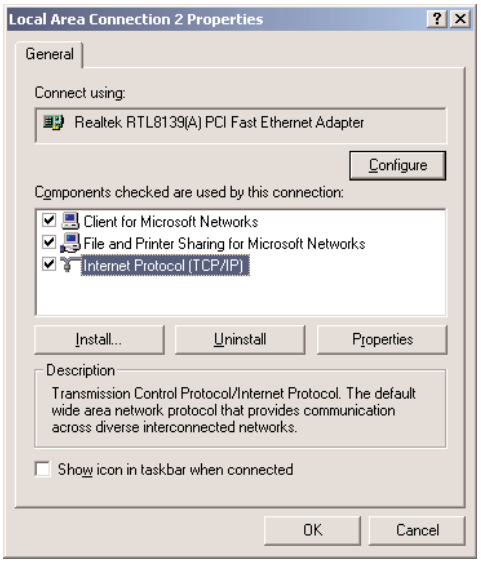

Local Area Connection 2 Status
General
Connection
Activity
Sent
Received
Properties
Disable
Close

Status: Connected
Duration: 00:06:48
Speed: 100.0 Mbps

	Sent	Received
Packets:	65	0

7. The "Local Area Connection Properties" window appears. Click **General**.

8. In the "Components checked are used by this connection" list box, double-click **Internet Protocol** (TCP/IP).



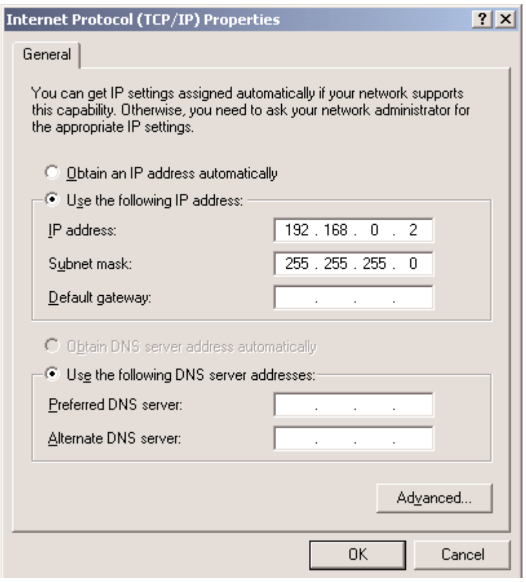
Connect using:
Realtek RTL8139(A) PCI Fast Ethernet Adapter

Components checked are used by this connection:
☑ Client for Microsoft Networks
☑ File and Printer Sharing for Microsoft Networks
☑ Internet Protocol (TCP/IP)

Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

☐ Show icon in taskbar when connected

9. The "Internet Protocol (TCP/IP) Properties" window appears.



You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

○ Obtain an IP address automatically
● Use the following IP address:
IP address: 192 . 168 . 0 . 2
Subnet mask: 255 . 255 . 255 . 0
Default gateway: . . .

○ Obtain DNS server address automatically
● Use the following DNS server addresses:
Preferred DNS server: . . .
Alternate DNS server: . . .

10. In the **General** tab, make sure the the circle next to "Obtain an IP Address automatically" is selected. When active, a black dot appears in the circle. If the circle already contains a black dot, leave it alone.

11. Enter the following numbers in the "IP Address" text box:

`192.168.0.2`

Do not include the periods; they are automatically entered.

12. Enter the following numbers in the "Subnet mask" text box:

`255.255.255.0`

Do not include the periods; they are automatically entered.

13. Click **OK**. The "Internet Protocol (TCP/IP) Properties" window disappears.

14 In the "Local Area Connection Properties" window, click **OK**. The Local Area Connection Properties window disappears.

15. Click **Close** in the Local Area Connection Status window. The window disappears.

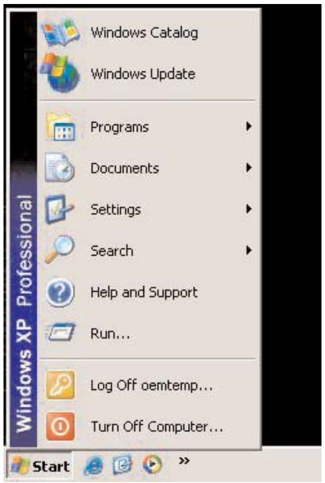
16. Close the Network and Dial-up Connections window by clicking on the "**x**" button at the upper right corner of the window.

The computer is now set up with a static IP address, allowing the user to access the Router's Advanced Setup utility.

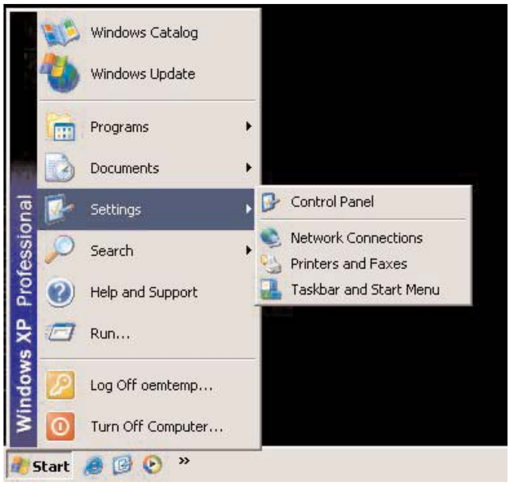
Windows XP

1. From the desktop, click on the **Start** button in the lower left corner.

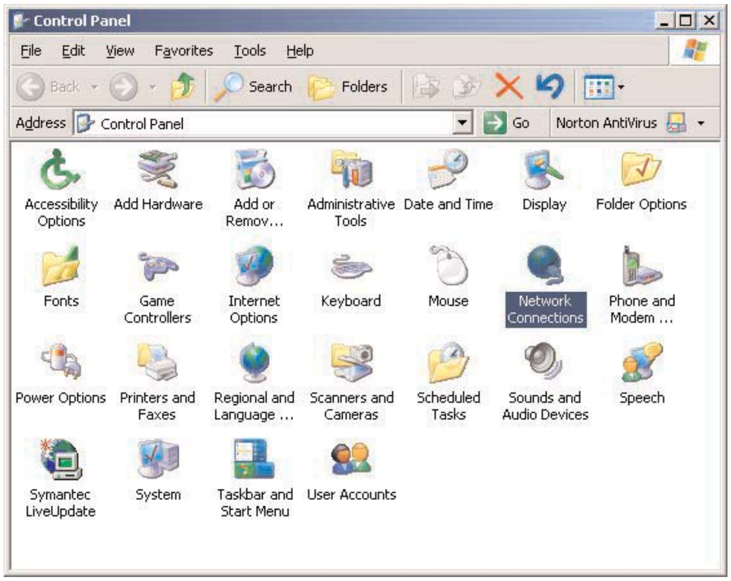
2. From the menu that appears, select **Settings**.


Windows XP Professional
Windows Catalog
Windows Update
Programs
Documents
Settings
Search
Help and Support
Run...
Log Off oemtemp...
Turn Off Computer...
Start

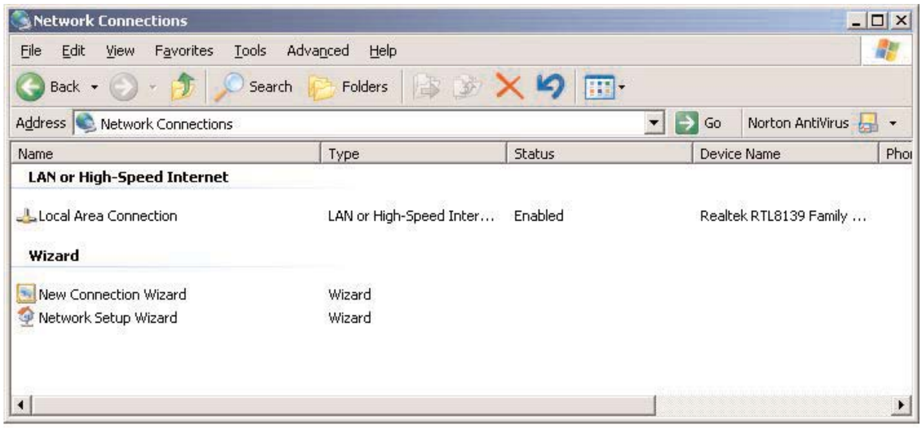
3. Another menu appears. Select **Control Panel**.


Windows Catalog
Windows Update
Programs
Documents
Settings
Search
Help and Support
Run...
Log Off oemtemp...
Turn Off Computer...
Control Panel
Network Connections
Printers and Faxes
Taskbar and Start Menu
Windows XP Professional
Start

4. When the “Control Panel” window appears, double-click **Network Connections**.


Control Panel
File Edit View Favorites Tools Help
Back Search Folders
Address Control Panel Go Norton AntiVirus
Accessibility Options
Add Hardware
Add or Remov...
Administrative Tools
Date and Time
Display
Folder Options
Fonts
Game Controllers
Internet Options
Keyboard
Mouse
Network Connections
Phone and Modem ...
Power Options
Printers and Faxes
Regional and Language ...
Scanners and Cameras
Scheduled Tasks
Sounds and Audio Devices
Speech
Symantec LiveUpdate
System
Taskbar and Start Menu
User Accounts

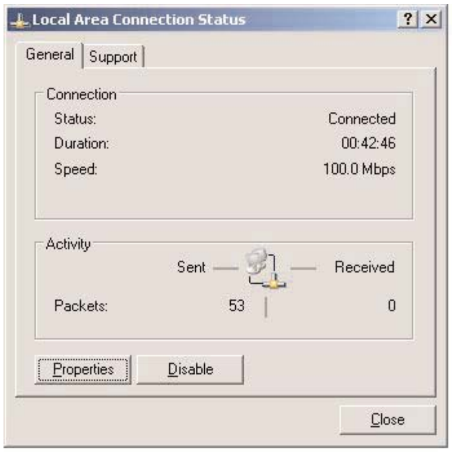
5. In the “Network Connections” window, double-click **Local Area Connection**. A number may be displayed after the Local Area Connection. If there is more than one Local Area Connection listed, locate the one that corresponds to the network card installed in your computer by finding the name of the network card in the **Device Name** column.


Network Connections
File
Edit
View
Favorites
Tools
Advanced
Help
Back
Search
Folders
Address
Go
Norton AntiVirus

Address: Network Connections

Name	Type	Status	Device Name	Phoı
LAN or High-Speed Internet				
Local Area Connection	LAN or High-Speed Inter…	Enabled	Realtek RTL8139 Family …	
Wizard				
New Connection Wizard	Wizard			
Network Setup Wizard	Wizard			

6. The “Local Area Connection Status” window appears. Select **General**, then click **Properties**.

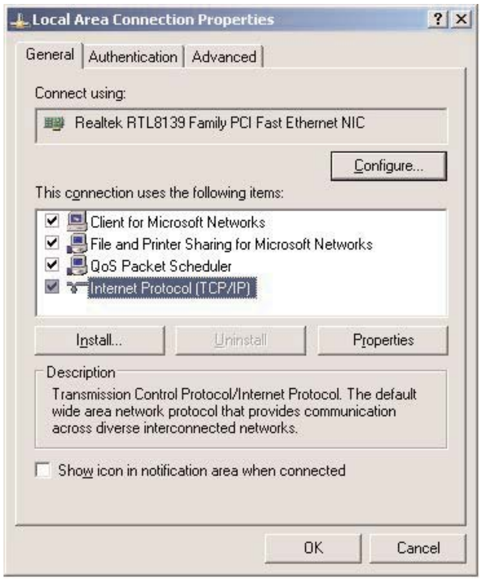

Local Area Connection Status
General
Support
Connection
Activity
Sent
Received
Properties
Disable
Close

Status: Connected
Duration: 00:42:46
Speed: 100.0 Mbps

Packets: Sent 53, Received 0

7. The “Local Area Connection Properties” window appears. Select **General**.

8. In the “Components checked are used by this connection” list box, double-click **Internet Protocol** (TCP/IP).


Local Area Connection Properties
General
Authentication
Advanced
Configure...
Install...
Uninstall
Properties
OK
Cancel

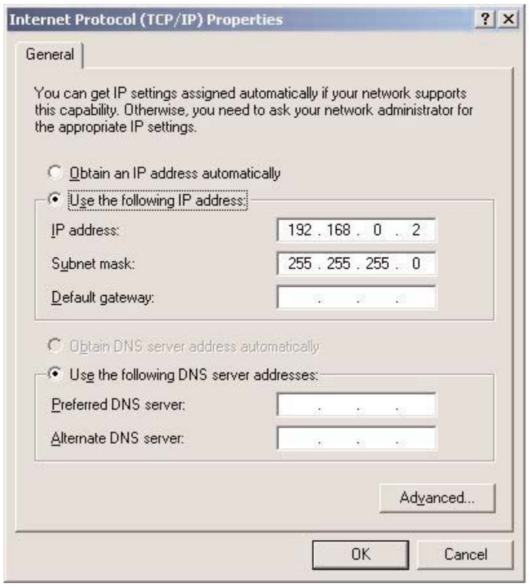
Connect using:
Realtek RTL8139 Family PCI Fast Ethernet NIC

This connection uses the following items:
- ☑ Client for Microsoft Networks
- ☑ File and Printer Sharing for Microsoft Networks
- ☑ QoS Packet Scheduler
- ☑ Internet Protocol (TCP/IP)

Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

☐ Show icon in notification area when connected

9. The “Internet Protocol (TCP/IP) Properties” window appears.


Internet Protocol (TCP/IP) Properties
General
Advanced...
OK
Cancel

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

○ Obtain an IP address automatically
● Use the following IP address:
IP address: 192 . 168 . 0 . 2
Subnet mask: 255 . 255 . 255 . 0
Default gateway: . . .

○ Obtain DNS server address automatically
● Use the following DNS server addresses:
Preferred DNS server: . . .
Alternate DNS server: . . .

10. In the **General** tab, make sure the the circle next to “Obtain an IP Address automatically” is selected. When active, a black dot appears in the circle. If the circle already contains a black dot, leave it alone.

11. Enter the following numbers in the “IP Address” text box:

`198.162.0.2`

Do not include the periods; they are automatically entered.

12. Enter the following numbers in the “Subnet mask” text box:

`255.255.255.0`

Do not include the periods; they are automatically entered.

13. Click **OK**. The Internet Protocol (TCP/IP) Properties window disappears.

14 In the Local Area Connection Properties window, click **OK**. The Local Area Connection Properties window disappears.

15. Click **Close** in the Local Area Connection Status window. The window disappears.

16. Close the Network and Dial-up Connections window by clicking on the “**x**” button at the upper right corner of the window.

The computer is now set up with a static IP address, allowing the user to access the Router’s Advanced Setup utility.

Specifications

B

General

Model Number

GEU404000-01 (Wireless-Ready Cable/DSL Router)

Standards

IEEE 802.3 (10BaseT)
IEEE 802.11b (Wireless, with *Action*tec 11Mbps Wireless PC Card installed)

Protocol

CSMA/CD

WAN

USB port for *Action*tec's USB Home DSL modem
Ethernet port for any Ethernet cable/DSL modem

LAN

10/100 RJ-45 port
USB port

Expansion

PCMCIA expansion slots (2)

Speed

LAN Ethernet: 10 Mbps
Wireless: See "Wireless Operating Range"

Cabling Type

10BaseT: UTP/STP Category 3 or 5

Wireless Operating Range

(with *Action*tec 11Mbps Wireless PC Card installed)

Indoors

Up to 30M (100 ft.) @ 11 Mbps
Up to 50M (165 ft.) @ 5.5 Mbps
Up to 70M (230 ft.) @ 2 Mbps
Up to 91M (300 ft.) @ 1 Mbps

Outdoors

Up to 152M (500 ft.) @ 11 Mbps
Up to 270M (885 ft.) @ 5.5 Mbps
Up to 396M (1300 ft.) @ 2 Mbps
Up to 457M (1500 ft.) @ 1 Mbps

Topology

Star (Ethernet)

Certifications

FCC Class B
FCC Class C
CE Mark Commercial
UL
Wi-Fi

Environmental

Power Input

External, 12V DC, 1 A

Operating Temperature

0° C to 40° C (32°F to 104°F)

Storage Temperature

-20°C to 70°C (-4°F to 158°F)

Operating Humidity

10% to 85% non-condensing

Storage Humidity

5% to 90% non-condensing

Glossary

Access Point

A device that allows wireless clients to connect to one another. An access point can also act as a bridge between wireless clients and a "wired" network, such as an Ethernet network. Wireless clients can be moved anywhere within the coverage area of the access point and remain connected to the network. If connected to an Ethernet network, the access point monitors Ethernet traffic and forwards appropriate Ethernet messages to the wireless network, while also monitoring wireless traffic and forwarding wireless client messages to the Ethernet network.

Client

A desktop or mobile computer connected to a network.

DHCP (Dynamic Host Configuration Protocol)

A protocol designed to automatically assign an IP address to every computer on your network.

DNS (Domain Name System) Server Address

Allows Internet host computers to have a domain name and one or more IP addresses. A DNS server keeps a database of host computers and their respective domain names and IP addresses so that when a user enters a domain name into a Web browser, the user is sent to the proper IP address. The DNS server address used by computers on the home network corresponds to the location of the DNS server the ISP has assigned.

DSL (Digital Subscriber Line) Modem

A modem that uses existing phone lines to transmit data at high speeds.

Encryption

A method to allow wireless data transmissions a level of security.

ESSID (Extended Service Set Identifier)

A unique identifier for a wireless network. Also known as "SSID."

Ethernet Network

A standard wired networking configuration using cables and hubs.

Firewall

A method preventing users outside the network from accessing and/or damaging files or computers on the network.

Gateway

A central device that manages the data traffic of your network, as well as data traffic to and from the Internet.

IP (Internet Protocol) Address

A series of four numbers separated by periods identifying a unique Internet computer host.

ISP Gateway Address

An IP address for the Internet router. This address is only required when using a cable or DSL modem.

ISP (Internet Service Provider)

A business that allows individuals or businesses to connect to the Internet.

LAN (Local Area Network)

A group of computers and devices connected together in a relatively small area (such as a house or an office). A home network is considered a LAN.

MAC (Media Access Control) Address

The hardware address of a device connected to a network.

NAT (Network Address Translation)

A method allowing all of the computers on a home network to use one IP address, enabling access to the Internet from any computer on the home network without having to purchase more IP addresses from the ISP.

PC Card

An adapter that inserts in the PCMCIA slot of a computer, enabling the communication with the Router.

PPPoE (Point-to-Point Protocol over Ethernet)

A method of secure data transmission.

Router

A central device that manages the data traffic of your network.

Subnet Mask

A set of four numbers configured like an IP address used to create IP address numbers used only within a particular network.

SSID

See "ESSID."

TCP/IP (Transmission Control Protocol/Internet Protocol)

The standard protocol for data transmission over the Internet.

WAN (Wide Area Network)

A network that connects computers located in separate areas, (i.e., different buildings, cities, countries). The Internet is a WAN.

WECA (Wireless Ethernet Compatibility Alliance)

An industry group that certifies cross-vender interoperability and compatibility of IEEE 802.11b wireless networking products and promotes the standard for enterprise, small business, and home environments.

WLAN (Wireless Local Area Network)

A group of computers and other devices connected wirelessly in a small area.

Notices

Regulatory Compliance Notices

Class B Equipment

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by implementing one or more of the following measures:

- Reorient or relocate the receiving antenna;
- Increase the separation between the equipment and receiver;
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected;
- Consult the dealer or an experienced radio or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by A*ction*tec Electronics, Inc., may void the user's authority to operate the equipment.

Declaration of conformity for products marked with the FCC logo – United States only.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference;
2. This device must accept any interference received, including interference that may cause undesired operation.

☞ ***Note***: To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

For questions regarding your product or the FCC declaration, contact:

*Action*tec Electronics, Inc.
760 N. Mary Ave.
Sunnyvale, CA 94086
United States
Tel: 408.752.7700
Fax: 408.541.9005

Limited Warranty

Hardware: *Action*tec Electronics, Inc., warrants to the end user ("Customer") that this hardware product will be free from defects in workmanship and materials, under normal use and service, for twelve (12) months from the date of purchase from *Action*tec Electronics or its authorized reseller.

*Action*tec Electronics' sole obligation under this express warranty shall be, at *Action*tec's option and expense, to repair the defective product or part, deliver to Customer an equivalent product or part to replace the defective item, or if neither of the two foregoing options is reasonably available, *Action*tec Electronics may, in its sole discretion, refund to Customer the purchase price paid for the defective product. All products that are replaced will become the property of *Action*tec Electronics, Inc. Replacement products may be new or reconditioned. *Action*tec Electronics warrants any replaced or repaired product or part for ninety (90) days from shipment, or the remainder of the initial warranty period, whichever is longer.

Software: *Action*tec Electronics warrants to Customer that each software program licensed from it will perform in substantial conformance to its program specifications, for a period of ninety (90) days from the date of purchase from *Action*tec Electronics or its authorized reseller. *Action*tec Electronics warrants the media containing software against failure during the warranty period. The only updates that will be provided are at the sole discretion of *Action*tec Electronics and will only be available for download at the *Action*tec Web site, www.actiontec.com. *Action*tec Electronics' sole obligation under this express warranty shall be, at *Action*tec Electronics' option and expense, to refund the purchase price paid by Customer for any defective software product, or to replace any defective media with software which substantially conforms to applicable *Action*tec Electronics published specifications. Customer assumes responsibility for the selection of the appropriate applications program and associated reference materials. *Action*tec Electronics makes no warranty or representation that its software products will meet Customer's requirements or work in combination with any hardware or applications software products provided by third parties, that the operation of the software products will be uninterrupted or error free, or that all defects in the software products will be corrected. For any third-party products listed in the *Action*tec Electronics software product documentation or specifications as being compatible, *Action*tec Electronics will make reasonable efforts to provide compatibility, except where the non-compatibility is caused by a "bug" or defect in the third party's product or from use of the software product not in accordance with *Action*tec Electronics published specifications or user guide.

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THIS *ACTION*TEC ELECTRONICS WARRANTY DOES NOT APPLY TO SUCH THIRD-PARTY SOFTWARE. FOR THE APPLICABLE WARRANTY, PLEASE REFER TO THE END-USER LICENSE AGREEMENT GOVERNING THE USE OF SUCH SOFTWARE.

Obtaining Warranty Service: Customer may contact *Action*tec Electronics Technical Support Center within the applicable warranty period to obtain warranty service authorization. Dated proof of purchase from *Action*tec Electronics or its authorized reseller may be required. Products returned to *Action*tec Electronics must be pre-authorized by *Action*tec Electronics with a Return Merchandise Authorization (RMA) number marked on the outside of the package, and sent prepaid and packaged appropriately for safe shipment, and it is recommended that they be insured or sent by a method that provides for tracking of the package. The repaired or replaced item will be shipped to Customer, at *Action*tec Electronics' expense, not later than thirty (30) days after *Action*tec Electronics receives the defective product.

Return the product to:
(In the United States)
*Action*tec Electronics, Inc.
760 North Mary Avenue
Sunnyvale, CA 94085

*Action*tec Electronics shall not be responsible for any software, firmware, information, memory data, or Customer data contained in, stored on, or integrated with any products returned to *Action*tec Electronics for repair, whether under warranty or not.

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Dispute Resolution: The customer may contact the Director of Technical Support in the event the Customer is not satisfied with *Action*tec Electronics' response to the complaint. In the event that the Customer is still not satisfied with the response of the Director of Technical Support, the Customer is instructed to contact the Director of Marketing. In the event that the Customer is still not satisfied with the response of the Director of Marketing, the Customer is instructed to contact the Chief Financial Officer and/or President.

Governing Law: This Limited Warranty shall be governed by the laws of the State of California, U.S.A., excluding its conflicts of laws and principles, and excluding the United Nations Convention on Contracts for the International Sale of Goods.